


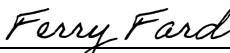
## Project Report For Project Approval

On Route Interstate 10  
Between 16<sup>th</sup> Street  
And County Line Road


I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:

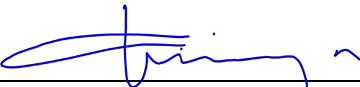
  
\_\_\_\_\_  
REBECCA GUIRADO  
Deputy District Director, Right of Way

APPROVAL RECOMMENDED:

*AS*   
\_\_\_\_\_  
FERRY R. FARD  
Project Manager (Acting)


CONCURRED BY:

  
\_\_\_\_\_  
DAVID BRICKER  
Deputy District Director, Environmental Planning

*Hcy*   
\_\_\_\_\_  
CATALINO A. PINING III  
Deputy District Director, Traffic Operations

*M A*   
\_\_\_\_\_  
JAMAL M. ELSALEH  
Deputy District Director, Design

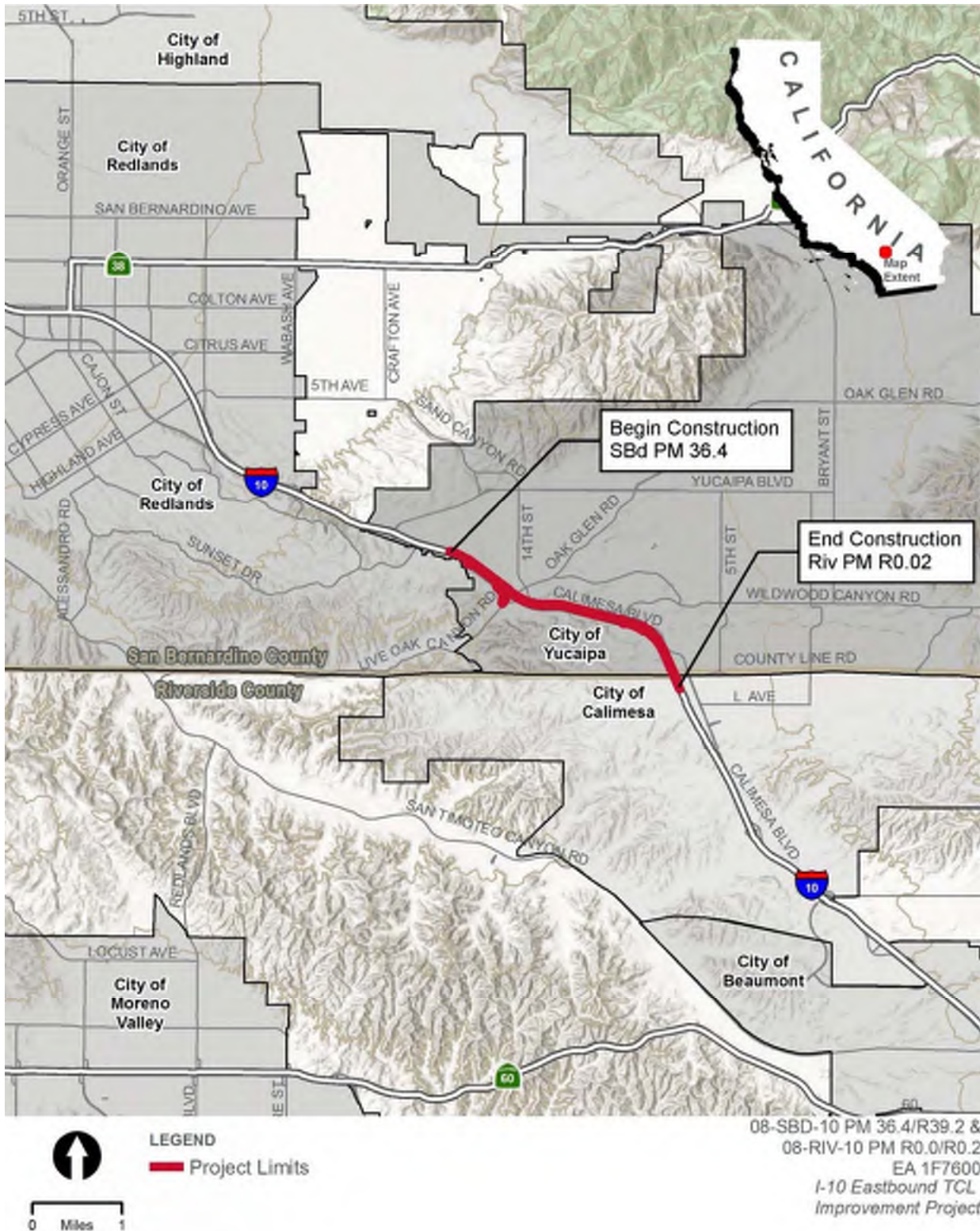
PROJECT APPROVED:

  
\_\_\_\_\_  
for, MICHAEL D. BEAUCHAMP  
District Director

November 12, 2020

\_\_\_\_\_  
Date

## Regional Vicinity and Project Location Map



I-10 EB Truck Climbing Lane in the City of Yucaipa, between 16<sup>th</sup> Street and County Line Road

This Project Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

10/28/2020

JULIAN HERNANDEZ, P.E.  
Project Engineer  
HDR Engineering, Inc.

Date



*P.M.*  
11/2/2020

**Paula  
Beauchamp**

Digitally signed by Paula  
Beauchamp  
Date: 2020.11.03  
10:23:51 -08'00'

Submitted By:

PAULA BEAUCHAMP  
Director of Project Delivery and Toll Operations  
SBCTA

Date

Concurred By:

*A.habib*

AYSHA HABIB  
Branch Chief, Caltrans District 8  
Design Oversight

11/03/2020

Date

---

## Table of Contents

<b>1. INTRODUCTION .....</b>	<b>1</b>
<b>2. RECOMMENDATION .....</b>	<b>2</b>
<b>3. BACKGROUND.....</b>	<b>3</b>
Project History .....	3
Community Interaction .....	3
Existing Facility .....	4
<b>4. PURPOSE AND NEED.....</b>	<b>6</b>
4A. Problem, Deficiencies, Justification .....	6
Purpose.....	6
Need .....	6
4B. Regional and System Planning .....	6
Identify Systems.....	6
State Planning .....	7
Regional Planning .....	7
Local Planning .....	8
Transit Operator Planning.....	8
4C. Traffic .....	8
Current and Forecasted Traffic .....	8
Collision Analysis .....	18
<b>5. ALTERNATIVES.....</b>	<b>21</b>
5A. Viable Alternatives .....	21
No-Build.....	21
Build (Preferred) Alternative .....	21
Proposed Engineering Features.....	21
Nonstandard Design Features .....	24
Interim Features .....	27
High-Occupancy Vehicle (Bus and Carpool) Lanes.....	28
Ramp Metering .....	28
California Highway Patrol (CHP) Enforcement Areas.....	28
Park-and-Ride Facilities.....	28
Utilities and Other Owner Involvement.....	28
Railroad Involvement.....	29
Highway Planting.....	29
Erosion Control .....	29
Noise Barriers.....	30
Nonmotorized and Pedestrian Facilities.....	30
Needed Roadway Rehabilitation and Upgrading.....	30
Needed Structure Rehabilitation and Upgrading .....	30
Cost Estimates.....	30
Right-of-Way Data.....	31

---

---

Effects of Projects-Funded-by-Others on State Highway .....	31
5B. Rejected Alternatives .....	31
<b>6. CONSIDERATIONS REQUIRING DISCUSSION.....</b>	<b>32</b>
6A. Hazardous Waste .....	32
6B. Value Analysis .....	34
6C. Resource Conservation .....	34
6D. Right-of-Way Issues .....	34
6E. Environmental Compliance.....	35
6F. Air Quality Conformity .....	36
6G. Title VI Considerations .....	36
6H. Life-Cycle Cost Analysis.....	37
6I. Reversible Lanes .....	37
<b>7. OTHER CONSIDERATIONS AS APPROPRIATE .....</b>	<b>37</b>
Public Hearing Process .....	37
Route Matters .....	38
Permits .....	39
Cooperative Agreements.....	40
Other Agreements .....	40
Report on Feasibility of Providing Access to Navigable Rivers .....	40
Public Boat Ramps.....	40
Transportation Management Plan .....	40
Stage Construction .....	41
Accommodation of Oversize Loads.....	41
Graffiti Control .....	42
Asset Management.....	42
Complete Streets .....	42
Climate Change Considerations.....	42
Broadband and Advance Technologies.....	42
Other Appropriate Topics .....	43
<b>8. FUNDING, PROGRAMMING AND ESTIMATE .....</b>	<b>43</b>
Funding .....	43
Programming.....	43
Estimate.....	43
<b>9. DELIVERY SCHEDULE .....</b>	<b>44</b>
<b>10. RISKS .....</b>	<b>44</b>
<b>11. EXTERNAL AGENCY COORDINATION .....</b>	<b>44</b>
<b>12. PROJECT REVIEWS.....</b>	<b>45</b>
<b>13. PROJECT PERSONNEL .....</b>	<b>46</b>
<b>14. ATTACHMENTS.....</b>	<b>46</b>

---

## 1. INTRODUCTION

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), proposes to extend the eastbound (EB) truck climbing lane (TCL) on Interstate 10 (I-10) from the 16<sup>th</sup> Street bridge in the City of Yucaipa to just east of the existing EB County Line Road Off-Ramp at the San Bernardino County/Riverside County line (Project)(see Attachment A). The extension of the existing TCL within the Project limits for an additional three miles from its current location will improve operations by separating slow moving vehicles from faster moving passenger cars on a freeway segment with sustained grades of up to 3.75 percent (%).

The Project includes paving the existing I-10 dirt median and adding a concrete barrier to divide the EB and westbound (WB) roadbeds. The final striping will shift the existing three EB general purpose (GP) lanes to the inside so that lane number one will be located along the improved median, and the existing outside lane will provide a continuation to the TCL that currently ends at the EB Live Oak Canyon Road Off-Ramp. The Project Limits include striping transitions beyond the pavement construction limits to join the existing lane configurations on I-10.

The only structural work required as part of this Project is the widening of the Oak Glen Creek Bridge (No. 54-0648) in order to close the gap in the median between the EB and WB roadbeds. This Project has been classified as a Category 4B because the improvements do not require substantial new right-of-way (R/W) and do not substantially increase traffic capacity. According to the Project Study Report/Project Development Support (PSR/PDS) dated June 2017, the Project category assignment was done in accordance with Chapter 8, Section 5 of the Caltrans Project Development Procedures Manual (PDPM), and approved by the Deputy District Director for Design in November 2017. See Attachment I – Project Category Approval. The following table provides a summary of the Project.

**Table 1-1 Project Summary**

<b>Project Limits</b>	08-SBd-10 PM 36.4/R39.2 & RIV-10-PM R0.0/R0.2	
<b>Number of Alternatives</b>	2 (No-Build Alternative & Build Alternative)	
	<b>Current Cost Estimate:</b>	<b>Escalated Cost Estimate:</b>
<b>Capital Outlay Support</b>	\$6.70 M	\$7.61 M
<b>Capital Outlay Construction</b>	\$20.33 M	\$24.74 M
<b>Capital Outlay Right-of-Way</b>	\$0	\$0
<b>Funding Source</b>	Local, State & Federal	
<b>Funding Year</b>	2021/2022	
<b>Type of Facility</b>	6 to 8 Lane Freeway	
<b>Number of Structures</b>	1, Oak Glen/Wilson Creek (Br. No. 54 0648 L/R)	
<b>Environmental Determination or Document</b>	CEQA: Initial Study (IS) NEPA: Environmental Assessment (EA)	
<b>Legal Description</b>	In San Bernardino County in Yucaipa from the 16 <sup>th</sup> Street Overcrossing to Riverside County Line & in Calimesa from San Bernardino County Line to 0.2 mile east of County Line Road Undercrossing	
<b>Project Development Category</b>	4B	

## 2. RECOMMENDATION

It is recommended that this Project Report be approved for the Build Alternative and that the Project proceeds to the Plans, Specifications and Estimate (PS&E) phase. This Project Report adopts the Environmental Document (ED) Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact (IS-MND/EA-FONSI) (Attachment L).

### **3. BACKGROUND**

#### Project History

A PSR/PDS was initiated at the request of SBCTA and completed in June of 2017. The PSR/PDS only evaluated one Build Alternative and the No-Build Alternative and recommended both for further study in the next phases of the Project.

The Build Alternative evaluated in this Project Report is consistent with the one evaluated in the PSR/PDS, which consists of median improvements that allow all the work to be done within the existing right-of-way (R/W) with minimal impacts to existing structures, utilities, drainage facilities, and traffic operations during construction.

An Initial Site Assessment (ISA) Checklist for hazardous waste was also completed during the PSR/PDS phase, and it determined that this Project has a low risk for potential hazardous waste involvement. This is still the case based on the ISA prepared during the Project Approval/Environmental Document (PA/ED) phase (Attachment K) and because other recently completed improvement projects have already disturbed the soils within the median.

#### Community Interaction

SBCTA and Caltrans' functional units were heavily involved throughout the preparation and approval of the PSR/PDS, and meetings were held with all stakeholders and functional units from Caltrans and SBCTA. Project issues were discussed in the Project Delivery Team (PDT) meetings as well as through phone calls and emails, and documented accordingly. The report was reviewed and approved after incorporating comments from all involved stakeholders.

In the current phase, the close coordination between SBCTA and Caltrans has continued, and the City of Yucaipa representatives have been informed about the progress of the Project as a consideration for the City's proposed new interchange at Wildwood Canyon Road which is located within the limits of this Project. The Cities of Redlands and Calimesa were also informed about the Project during the utility asbuilt research at the beginning of the PA/ED phase. These entities did not express support nor objection for the Project during the utility asbuilt research nor during the public circulation review period.

As part of the Native American Consultation, Caltrans consulted with the Native American Heritage Commission (NAHC) Native American Tribes in September of 2017 to elicit pertinent cultural resource information available in the Sacred Lands File. NAHC responded stating that the Sacred Lands File search for the Project was completed and that the results were negative, but that the area is sensitive for cultural resources. The NAHC provided a list of Native American contacts within the region to follow up, and Caltrans contacted the following tribes: the Gabrieleno Band of Mission Indians, the Gabrielino-Tongva Tribe, the San Manuel Band of Mission Indians, the Serrano Nation of Mission Indians, and the Soboba Band of Luiseño Indians. After further evaluation it was determined that there is little to no potential for encountering intact and significant subsurface cultural deposits during construction.

The circulation of the Draft Environmental Document (DED) for public review took place from July 3, 2020 through August 10, 2020. Comments were considered and responded to in



writing, and are documented in Appendix I of the IS-MND/EA-FONSI for the Project. More details are also provided in Section 7 of this Project Report.

Existing Facility

I-10 is the southernmost cross-country interstate highway in the American Interstate Highway System. It stretches from the Pacific Ocean at California State Route 1 (Pacific Coast Highway) in Santa Monica, California, to Interstate 95 (I-95) in Jacksonville, Florida.

I-10 provides for the safe and efficient interstate and interregional movement of goods and people. The route also serves as a major east/west urban corridor and commuter route between Los Angeles and the Counties of San Bernardino and Riverside. Rural areas in eastern Riverside County are connected to the urban centers to the west via I-10.

Within District 8, the centers of population, commerce, industry, agriculture, mineral wealth, and recreation are spatially and economically connected to ports, airports, rail yards, numerous highways and other states by I-10.

This segment of I-10 is an access-controlled route that currently provides six-lanes with three 12-foot wide Mixed Flow Lanes (MFLs) in each direction, 10-foot wide inside and outside shoulders, and a 36-foot wide median that is unpaved between the edges of shoulder and that provides metal thrie beam barrier to separate the eastbound and westbound traffic. Currently there are no existing high occupancy vehicle lanes within the Project limits or in the vicinity of the Project. The width of existing R/W is predominantly between 170’ and 200’ but increases at local interchanges, at the Wildwood Safety Roadside Rest Area (SRRA), and at other locations where graded slopes exist.

The terrain within this segment is mostly rolling with upward steep grades of up to 3.75% in the eastbound direction between Live Oak Canyon Road and County Line Road. Three local roads traverse over or under I-10 within the limits of the Project:

- 16<sup>th</sup> Street overcrossing – No access to/from I-10
- Live Oak Canyon Road overcrossing – Local interchange with access to/from I-10
- County Line Road undercrossing – Local interchange with access to/from I-10

The on-ramps from the local interchanges and from the Wildwood SRRA provide single lane entrances that are currently not metered. No California Highway Patrol (CHP) enforcement areas exist within the median or at any of the on-ramp entrances, but there is a small California Highway Patrol (CHP) office at the Wildwood SRRA. All of the exit ramps are single lane exits. The list of existing structures within the project limits is shown in the following table.

**Table 3-1 Existing Structures**

<b>Structure Name</b>	<b>Number</b>	<b>County</b>	<b>PM</b>
16 <sup>th</sup> Street (OC)	54-0615	San Bernardino	36.44
Oak Glen Creek	54-0648	San Bernardino	R36.90
Live Oak Canyon Road (OC)	54-1291	San Bernardino	R37.03
Wildwood Creek	54-0312	San Bernardino	R38.53
County Line Road (UC)	56-0484	Riverside	R0.02

No park and ride lots exist within the Project limits, with the closest one located on Hampton Road on the north side of I-10 just to the west of Yucaipa Boulevard. No railroad facilities exist within the limits of the Project.

There are local roads that run parallel to I-10 and serve as frontage/collector roads for local streets and private properties located on either side of the freeway. These are:

- Outer 10 Highway South, which is a two lane bi-directional road located on the south side of I-10 that runs from Gold Hill Lane west of Yucaipa Boulevard to Live Oak Canyon Road.
- Dunlap Boulevard, which is a two lane bi-directional road located on the north side of the I-10 and connects Avenue E on the east side of Yucaipa Boulevard with 14th Street on the west side of Live Oak Canyon Road. From there, 14th Street then connects to Calimesa Boulevard, which is also a two lane bi-directional road located on the north side of the I-10 that runs between Live Oak Canyon Road and County Line Road.

Within the Project limits there are existing storm drain facilities located throughout the edge of the roadways; primarily overside drains (OSD), which are used to capture the roadway runoff and direct them to water quality swales and further to the regional drainage systems. Portions of the roadway also have grate inlets to capture runoff or sheet flow off into water quality Best Management Practices (BMPs) or earthen swales.

The Project site crosses three major regional drainage systems; Wilson Creek Channel, Yucaipa Creek Channel, and Wildwood Channel. No major impacts or alterations to local drainage systems are expected due to the Project improvements.

During rain events, the paved areas along tangent segments of I-10 primarily sheet flow from the median towards the outside edge of the roadway. Along horizontal curves, the high side of the superelevated roadbed drains towards the median where runoff is collected by inlets and then conveyed via pipes to swales or ditches located outside the roadway. These swales and ditches then eventually discharge the water to the nearest regional system.

## **4. PURPOSE AND NEED**

### **4A. Problem, Deficiencies, Justification**

#### **Purpose**

The purpose of the Project is to improve traffic operations by separating trucks and other slow vehicles from faster moving passenger vehicles along this segment of EB I-10 that includes sustained steep uphill grades. By providing a dedicated climbing lane it is expected that conflicts between slow and fast moving vehicles will be reduced, resulting in improved traffic operations.

#### **Need**

Trucks characteristically exhibit the lowest level of hill-climbing performance of all vehicles on highways and freeways. Along eastbound I-10 within the Project limits, there is a sustained upward grade of up to nearly four percent. Without a truck climbing lane, slow moving trucks create operational conflicts between faster-moving automobiles and slower-moving trucks.

A large number of commercial trucks travel along this segment of the eastbound I-10 within the Project limits. According to the PSR/PDS, average daily traffic (ADT) truck volumes in 2016 along I-10 within the Project limits make up 16 percent of the total volume of vehicle traffic. Truck accident frequency can be correlated to an increased differential in speed between trucks and faster moving vehicles. Therefore, climbing lanes are advantageous when excessive speed differentials exist.

Improvements along eastbound I-10 within the Project limits are needed to reduce weaving and improve efficiency for motorists. In summary, per the Traffic Operations Analysis Report (TOAR) (Caltrans 2018) prepared for the Project, the following conditions warrant adding the TCL:

- The running speed of trucks falls 10 miles per hour (mph) or more below the running speed of remaining traffic.
- The critical length of grade is less than the length of grade being evaluated.
- The sustained upgrades are greater than two percent, and the total rise is greater than 250 vertical feet (').
- The existing Level of Service (LOS) for the upgrade is equal to or better than LOS D.
- The addition of the TCL improves traffic operations and the LOS by one grade.

### **4B. Regional and System Planning**

#### Identify Systems

The full length of I-10 within District 8 is included in the National Highway System (NHS), the Department of Defense Priority Network, and the Strategic Highway Corridor Network (STRAHNET). The 1982 Federal Surface Transportation Assistance Act (STAA) identifies I-10 as part of the National Network for STAA Trucks. The California Functional Classification for I-10 is Interstate Highway.

State Planning

This Project is listed in the 2019 Federal Transportation Improvement Program (FTIP) from the Southern California Association of Governments (SCAG) with Project ID 20179901. The Project improvements are consistent with State, regional and local mobility goals and are being coordinated with the applicable governmental, regulatory, and local agencies in the area to be consistent with specific local goals and objectives. The following table shows other ongoing projects that are located within the Project limits and their current status. The TCL does not preclude any of these planned future improvements.

**Table 4-1 Future Projects**

<b>EA</b>	<b>Project Limits</b>	<b>Scope of Work</b>	<b>Status / (Milestone Date)</b>
0K293	SBd-10 R36.8-R39.2	Rehabilitate Roadway (State SHOPP funds)	CCA (09-01-2021)
1J580	SBd-10 38.10	Install electric zero-emission vehicle (ZEV) charging stations and dynamic truck parking signs at the Wildwood Safety Roadside Rest Area	PA/ED (10-01-2021)
38423	SBd/Riv-10 29.4-R39.2/ R0.0-R0.117	Install wireless Vehicle Detection Stations (VDS) pole, Changeable Message Signs (CMS), Closed Circuit Television (CCTV), Data Node Cabinet and Fiber Optic Elements	CCA (09-03-2021)
1C300	SBd-10 34.2- R39.1	Replace diseased plants	CCA (04-16-2021)
1L490	SBd-10 R37.4-R38.1	Install Dynamic Truck Parking Signs	PA/ED (11-16-2020)

Regional Planning

The following additional projects are programmed for funding in SCAG’s 2016 financially constrained Regional Transportation Plan (RTP), adopted on April 2016 and the Amendment adopted on April 2017, as well as in the 2019 Federal Transportation Improvement Program (FTIP) Project Listing Part A dated September 2018:

- RTP ID 4M04033: The addition of the future I-10 / Wildwood Canyon Road Interchange (Estimated completion year 2030), currently in the PID phase (EA 1K090) supported by local SBCTA Measure I and City funds.
- RTP ID 3TK04MA12: The addition of an EB TCL from the San Bernardino County Line to the I-10/SR-60 Junction (Estimated completion year 2025), PIP phase with RCTC Measure A and possible Federal fund allocations.
- FTIP ID RIV131201: Reconstruction of existing interchange at I-10/County Line Road with two 90’ radius on/off ramps roundabouts, extending 1,300 linear feet from County Line Lane to approximately 300’ west of Calimesa Boulevard. The project will include ramp realignment for all four ramps with minor ramp widening.

SCAG’s 2016-2040 RTP/Sustainable Communities Strategy (SCS) Final Amendment #3 dated September 6, 2018, shows project ID 4H01003 as cancelled. The project proposed to

add one high occupancy vehicle (HOV) lane in each direction of I-10 between Ford Street in the City of Redlands and Riverside County Line in the City of Yucaipa.

#### Local Planning

The new I-10/Wildwood Canyon Road Interchange (also mentioned in the Regional Planning section above) was initiated by the City of Yucaipa in coordination with Caltrans and SBCTA, and is expected to be completed in 2030. The I-10/Wildwood Canyon Road Interchange would be located approximately one mile east of Live Oak Canyon Road/Oak Glen Road Interchange and one mile west of County Line Road Interchange, in close proximity to the existing Wildwood Safety Roadside Rest Area (SRRA).

The objective of the I-10/Wildwood Canyon Road Interchange is to improve access to the City of Yucaipa and improve traffic operations at existing interchanges, taking into account current and future land uses, the associated traffic volumes, and travel demands on I-10. The City of Yucaipa 2008 Freeway Corridor Specific Plan and 2016 General Plan identifies planned businesses/commercial and residential housing north and south of I-10 along the extension of Wildwood Canyon Road near the Wildwood SRRA.

By the time when the I-10/Wildwood Canyon Road interchange gets built the I-10 EB TCL median improvements will be in place. The new interchange project will add a bridge structure spanning over I-10, with an intermediate column bent in-line with the median concrete barrier. The ramp connections for the new interchange may require the addition of segments of auxiliary lanes at some of the exit and entrance ramps. Coordination between both projects has already taken place and will continue in the next phases of design.

#### Transit Operator Planning

Different long distance and interstate commuter transit services traverse this segment of I-10. However, these transit services will not be affected by the Project since all existing lanes and entrance/exit ramps on both directions of I-10 will remain open during construction.

### **4C. Traffic**

#### Current and Forecasted Traffic

This section provides a summary of the current and forecasted traffic volumes along the EB I-10 mainline under existing (2017), opening year (2025), and horizon year (2045) for the No-Build and Build (Preferred) Alternative. This summary is based on information from the TOAR approved in October 2018.

The TOAR evaluated the EB I-10 between Yucaipa Boulevard and County Line Road Post-Mile 36.4 to R39.2, and from Post-Mile R0.0 to R0.2 in Riverside County. The study locations consist of the I-10 mainline segments and ramp junctions in the study area.

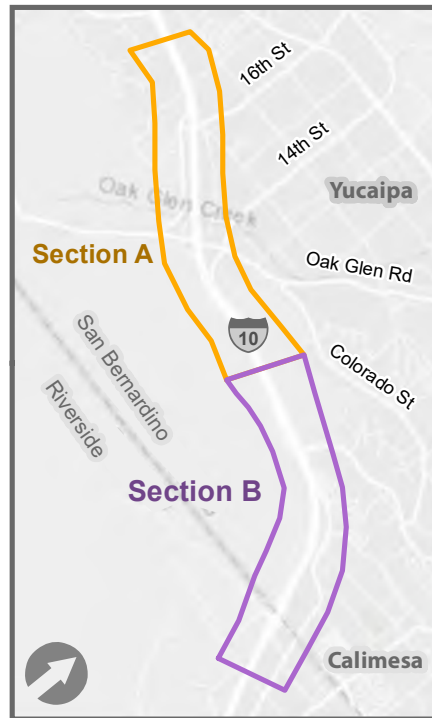
The I-10/Wildwood Canyon Road Interchange is proposed to be completed by Year 2030 and it is currently in the Project Initiation Document (PID) phase. Therefore, traffic forecasts were developed for the I-10/Wildwood Canyon Road Interchange under Design Year (2045) conditions only. The study scenarios for traffic operations analysis include the following:

- Existing (2017) Conditions

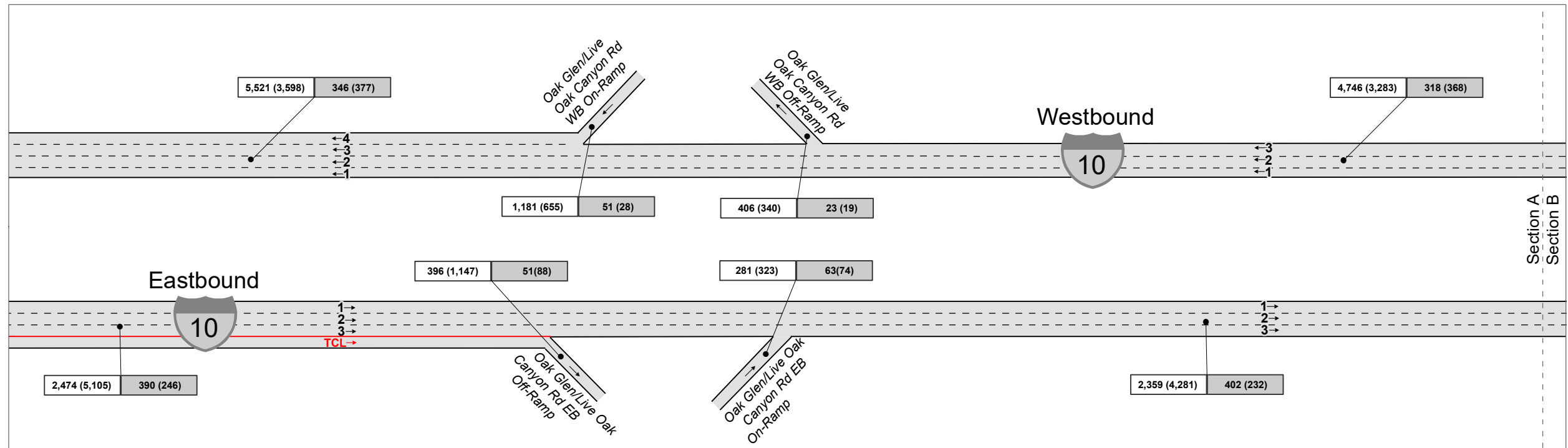
- Opening Year (2025) No-Build Alternative
- Opening Year (2025) Build Alternative
- Design Year (2045) No-Build Alternative
- Design Year (2045) Build Alternative

*Existing Conditions (2017)*

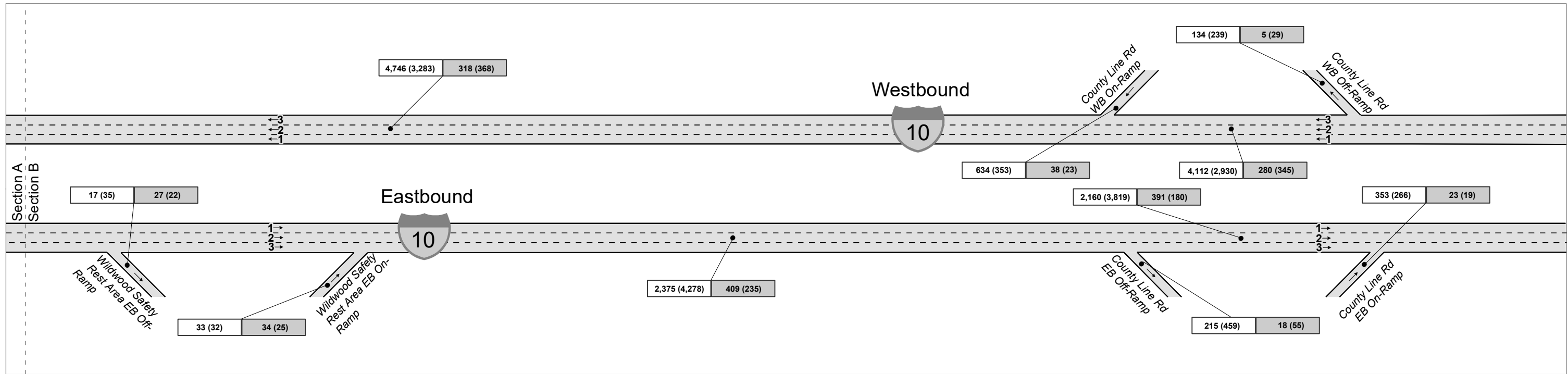
EB and WB freeway mainline volumes were collected during the AM Peak Period (7 AM to 9 AM) and the PM Peak Period (4PM to 6PM) from the 16th Street overcrossing on Tuesday, November 14, 2017. Traffic volume data and classification information was collected by lane for the mainline. Twenty-four hour tube counts with classification data was also collected on all study area ramps. Traffic data was collected as Average Daily Traffic (ADT)/Peak Hour by type and by axle for the mainline/ramps. The percentage of trucks along this segment of I-10 is 23 percent. Peak hour travel time runs were also completed by lane to allow for calibration of the VISSIM model. **Figure 1** shows the Existing (2017) passenger car and truck (heavy vehicle) peak hour traffic volumes for the freeway mainline and ramps in the study area.



**PROJECT LOCATION**



Not to Scale



- General Purpose Lane
- Truck Climbing Lane
- X,XXX (X,XXX) Passenger Car AM(PM) Peak Hour Traffic Volume
- X,XXX (X,XXX) Heavy Vehicle AM(PM) Peak Hour Traffic Volume

Figure 1

**Peak Hour Traffic Volumes - Existing (2017) Conditions**



### *Opening Year (2025)*

A traffic analysis was conducted for the No-Build and Build (Preferred) Alternative under the Opening Year (2025) conditions.

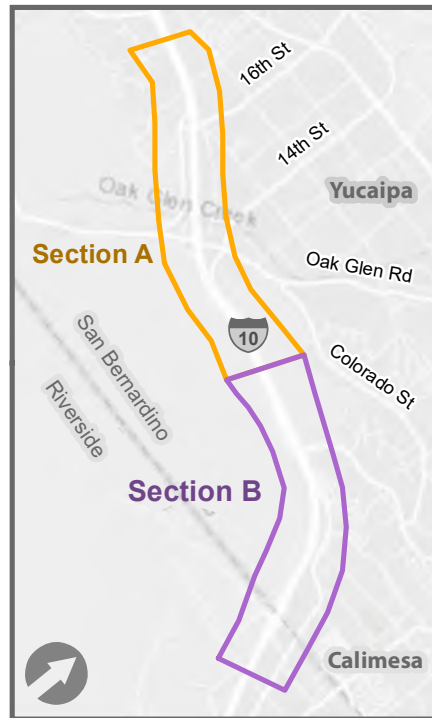
For the Build Alternative analysis under Opening Year (2025), the TCL was assumed to end at the County Line Road Overcrossing just past the Riverside County Line. This is considered an interim condition provided that by the Design Year (2045) scenario, the TCL would be extended into Riverside County as part of a separate project. That project (RTP ID 3TK04MA12) has a completion year of 2025 in the 2016 RTP; but based on coordination between the leading agencies, it is not likely to be completed until after the extension of the TCL from Yucaipa Boulevard to County Line Road is in place. Therefore, it was determined that the interim condition should be analyzed in the Opening Year analysis, with the continuation of the TCL being analyzed in the Design Year analysis.

As previously discussed, the I-10/Wildwood Canyon Road Interchange is not expected to be completed by 2025; therefore, it is assumed that the I-10/Wildwood Canyon Road Interchange will not be in place under Opening Year (2025) conditions.

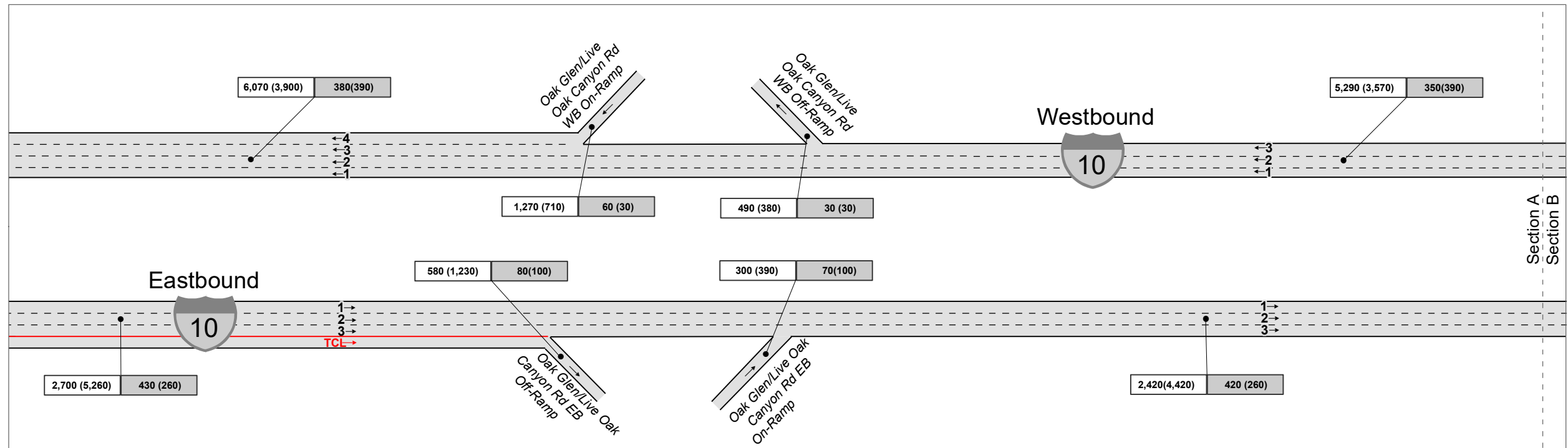
For the No-Build Alternative, the Opening Year (2025) passenger car and truck (heavy vehicle) AM and PM peak hour traffic forecasts for the I-10 mainline segments and ramps are shown in **Figure 2**.

The Opening Year (2025) freeway mainline segment and ramp volumes for the Build Alternative are shown in **Figure 3**. Due to the increase in operational efficiency, slightly higher traffic volumes are expected under the Build Alternative as compared to the No-Build Alternative.

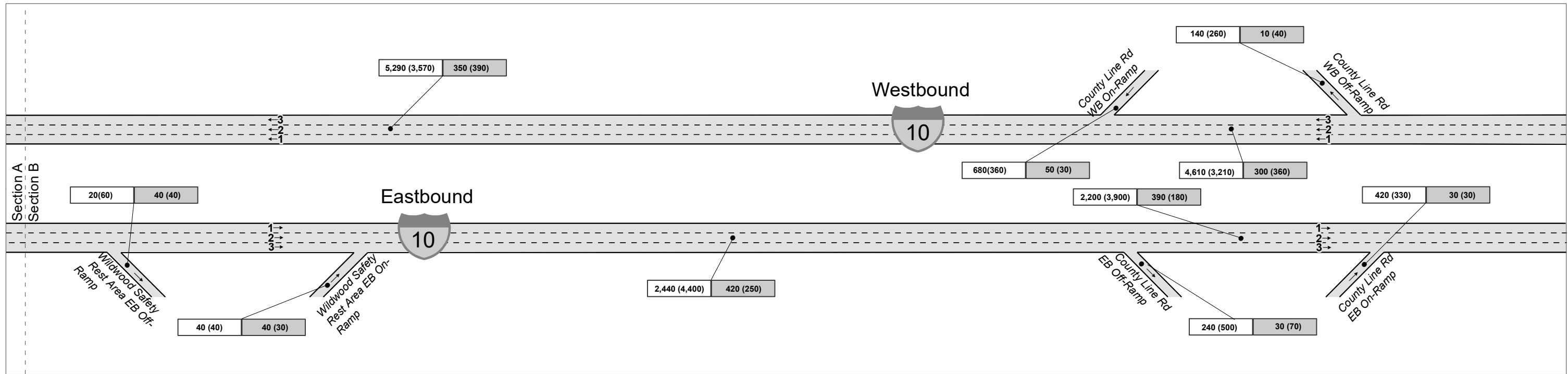




**PROJECT LOCATION**



Not to Scale

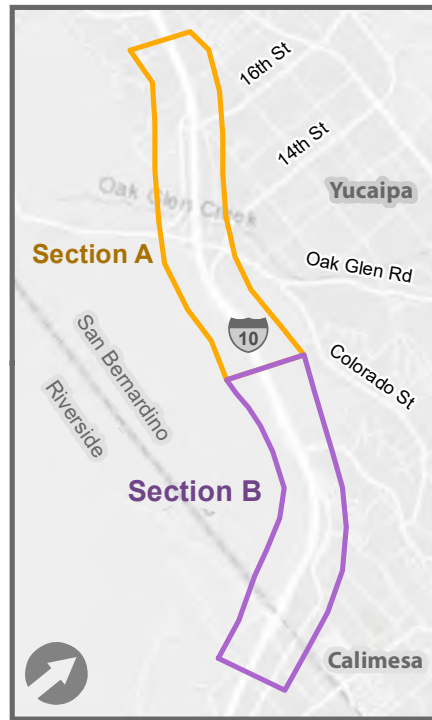


- General Purpose Lane
- Truck Climbing Lane
- X,XXX (X,XXX) Passenger Car AM(PM) Peak Hour Traffic Volume
- X,XXX (X,XXX) Heavy Vehicle AM(PM) Peak Hour Traffic Volume

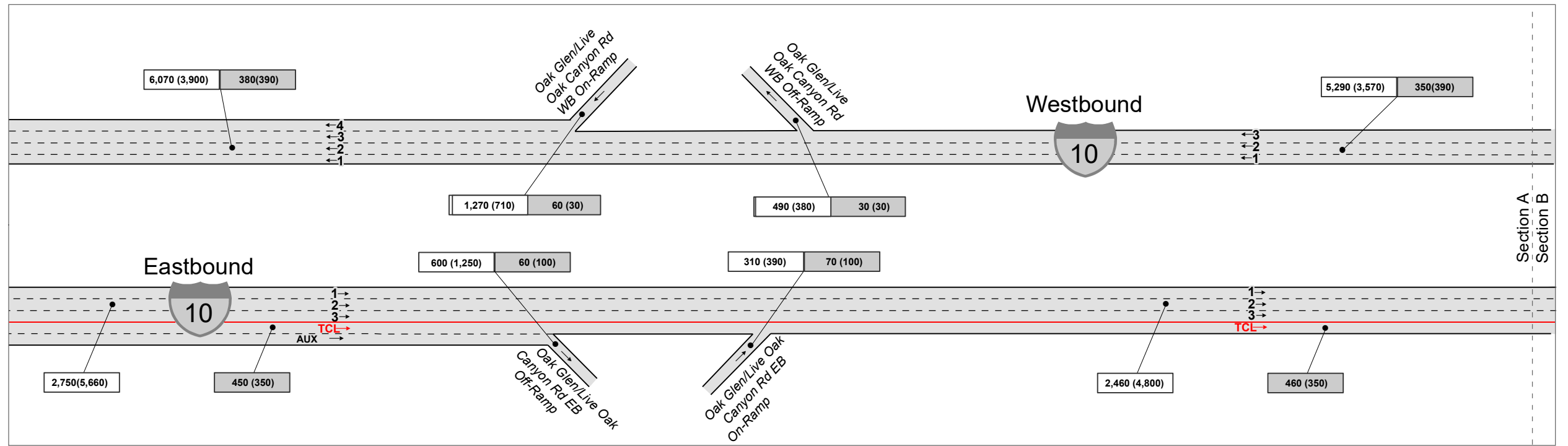
Figure 2

**Peak Hour Traffic Volumes - Opening Year (2025) - No Build Alternative**

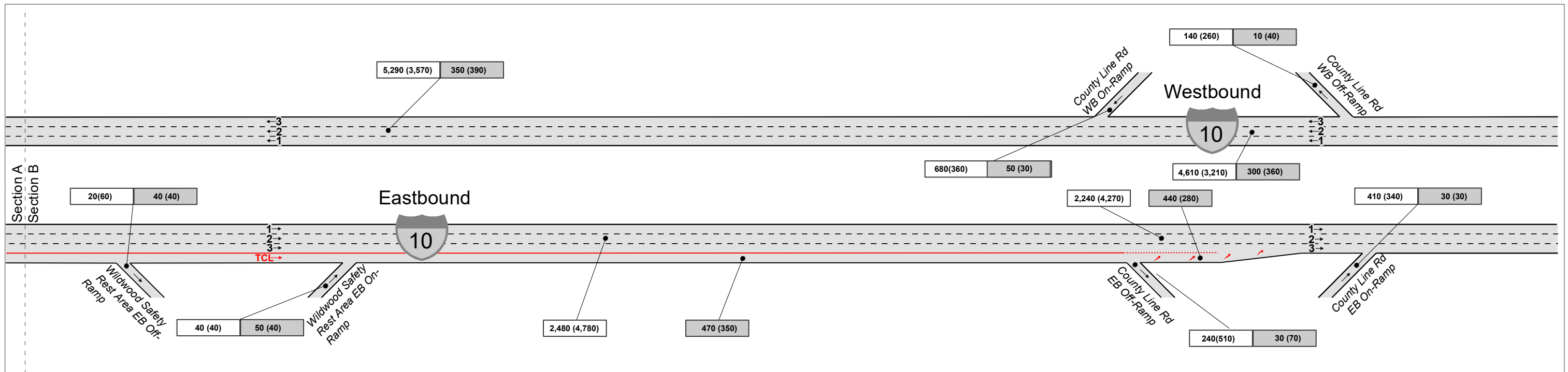




**PROJECT LOCATION**



Not to Scale



- General Purpose Lane
- Truck Climbing Lane

**X,XXX (X,XXX)** Passenger Car AM(PM) Peak Hour Traffic Volume

**X,XXX (X,XXX)** Heavy Vehicle AM(PM) Peak Hour Traffic Volume



Figure 3

**Peak Hour Traffic Volumes-  
Opening Year (2025) Build Alternative**

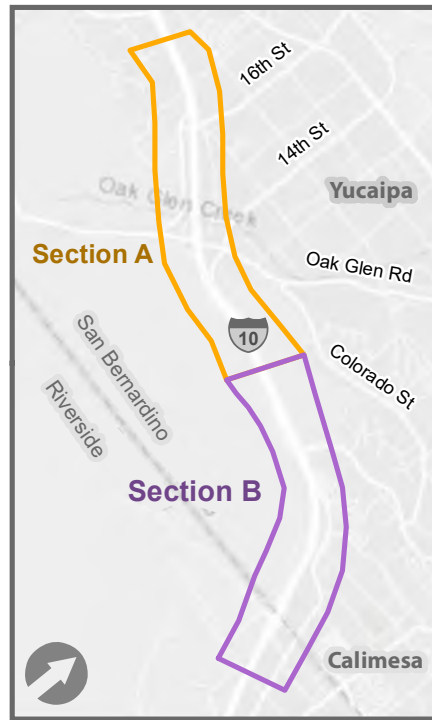
*Design Year (2045)*

A traffic analysis was conducted for the No-Build and Build (Preferred) Alternative under the Design Year (2045) conditions.

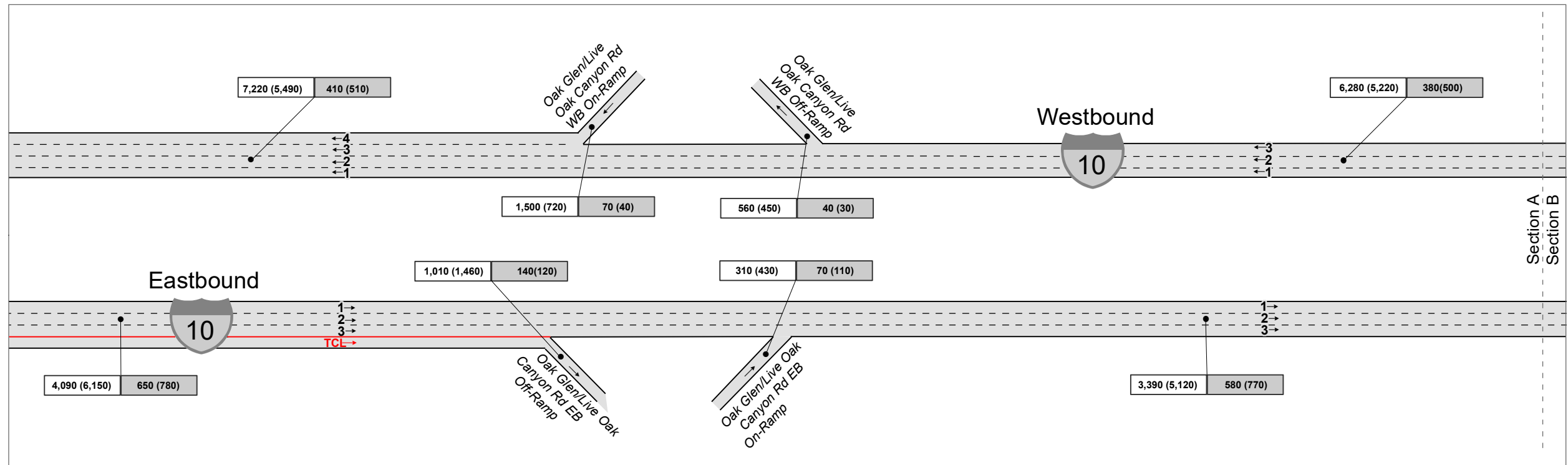
As described in the previous section, SCAG's 2016 financially constrained RTP projects are assumed to be in place for the Design Year forecasts, including the I-10/Wildwood Canyon Road Interchange and the continuation of the TCL from the Riverside County Line to the State Route 60 Junction.

For the No-Build Alternative, the Design Year (2045) passenger car and truck (heavy vehicle) AM and PM peak hour traffic forecasts for the I-10 mainline segments and ramps are shown on **Figure 4**.

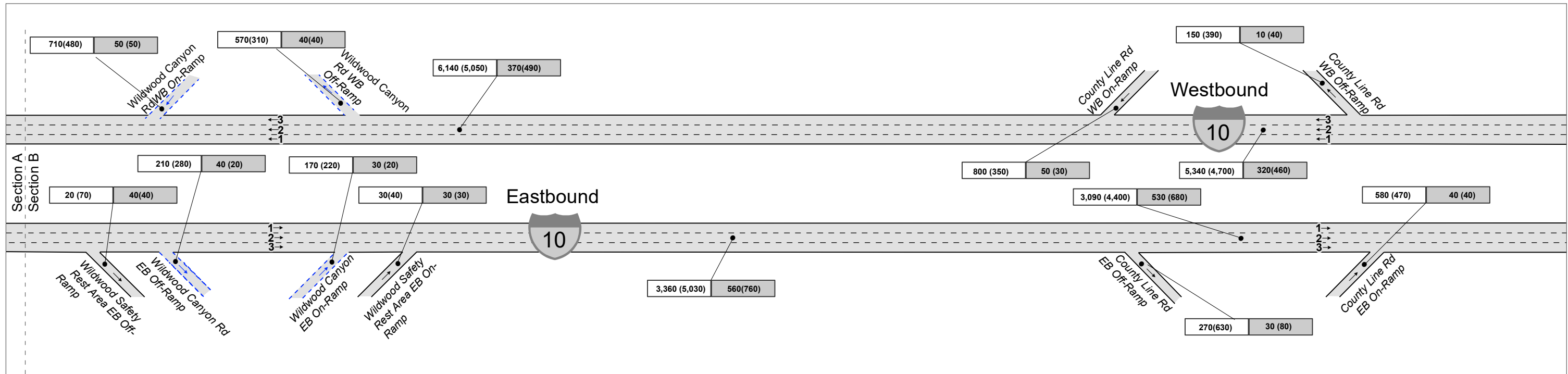
The Design Year (2045) traffic forecasts for the I-10 mainline segments and ramp volumes for the Build Alternative are shown on **Figure 5**. Due to the increase in operational efficiency, slightly higher traffic volumes are expected under the Build Alternative as compared to the No-Build Alternative.



**PROJECT LOCATION**



Not to Scale

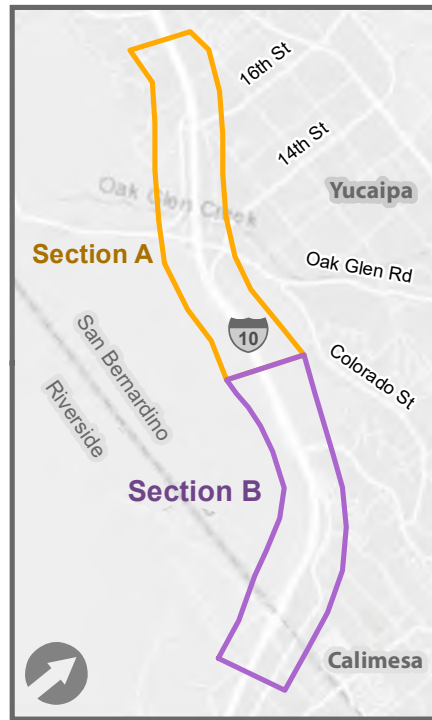


- General Purpose Lane
- Truck Climbing Lane
- Proposed Wildwood Canyon Rd Interchange Ramps
- X,XXX (X,XXX) Passenger Car AM(PM) Peak Hour Traffic Volume
- X,XXX (X,XXX) Heavy Vehicle AM(PM) Peak Hour Traffic Volume

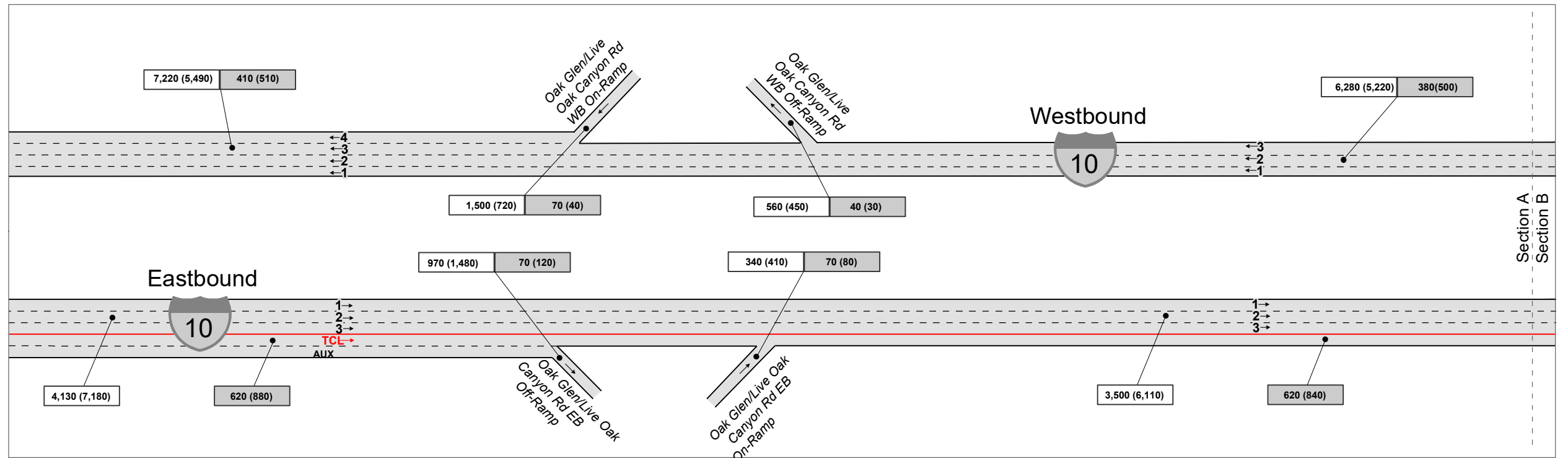
Figure 4

**Peak Hour Traffic Volumes -  
Design Year (2045) No Build Alternative**

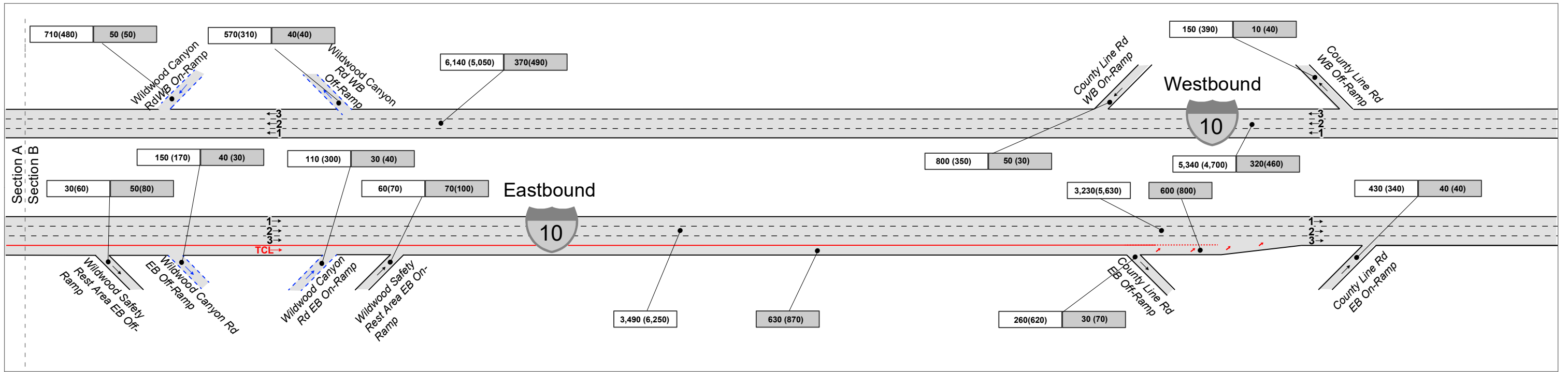




**PROJECT LOCATION**



Not to Scale



- General Purpose Lane
  - Truck Climbing Lane
  - Future Wildwood Canyon Rd Interchange Ramps
- X,XXX (X,XXX)** Passenger AM(PM) Peak Hour Traffic Volume
- X,XXX (X,XXX)** Heavy Vehicle AM(PM) Peak Hour Traffic Volume



Figure 5

**Peak Hour Traffic Volumes - Design Year (2045) Build**

**Table 4-2** provides a summary of the EB ADTs under the No-Build and Build (Preferred) Alternatives for different segments of the mainline and ramps for the existing (2017), opening year (2025) and design year (2045).

**Table 4-2 Summary of I-10 Eastbound Freeway ADTs**

Study Segment	Description	Existing (2017)		No Build		Build			
		Mainline	Truck	Opening Year Mainline	Design Year Mainline	Opening Year Mainline	Truck	Design Year Mainline	Truck
Mixed Flow between Yucaipa Boulevard and Oak Glen Road	Mixed Flow	59,172	7,660	68,600	80,400	70,700		86,700	
Truck Lane between Yucaipa Boulevard and Oak Glen Road	Truck Lane						10,400		18,300
Off-Ramp to Oak Glen Road	Ramp	2,750	1,035	4,700	7,000	4,500	1,200	8,300	1,400
On-Ramp from Oak Glen Road	Ramp	3,557	943	5,400	5,500	4,300	1,000	5,600	1,000
Mixed Flow between Oak Glen Road and the Wildwood Safety Rest Area	Mixed Flow	59,979	7,568	69,300	78,900	70,500		84,000	
Truck Lane between Oak Glen Road and the Wildwood Safety Rest Area	Truck Lane						10,200		17,900
Off-Ramp to the Wildwood Safety Rest Area	Ramp	763	492	1,500	9,000	900	500	6,600	700
Off-Ramp to Wildwood Canyon Road	Ramp								
On-Ramp from Wildwood Canyon Road	Ramp								
On-Ramp from the Wildwood Safety Rest Area	Ramp	765	470	1,300	1,300	1,000	3,700	1,700	13,000
Mixed Flow between the Wildwood Safety Rest Area and County Line Road	Mixed Flow	59,981	7,546	69,100	71,200	70,600		79,100	
Truck Lane between the Wildwood Safety Rest Area and County Line Road	Truck Lane						13,400		30,200
Off-Ramp to County Line Road	Ramp	5,554	568	7,000	7,500	6,200	600	7,100	700
Mixed Flow between County Line Road Off-Ramp and On-Ramp	Mixed Flow	54,427	6,978	62,100	63,700	64,400		72,000	
Truck Lane between County Line Road Off-Ramp and On-Ramp	Truck Lane						12,800		29,500
On-Ramp from County Line Road	Ramp	3,777	235	5,400	9,200	3,700	300	3,200	400

Collision Analysis

Traffic accident data was collected from Caltrans’ Traffic Accident Surveillance and Analysis System (TASAS) for a three-year period from July 1, 2017, through June 30, 2020, for I-10 EB mainline segments and ramps within the Project limits (Yucaipa Boulevard to County Line Road).

**Table 4-3** shows the number of actual fatal, fatal plus injury, and total collision rates on the freeway mainline and ramps within the Project limits in comparison with the statewide average collision rates on similar facilities.

As shown in the table, collision rates at three out of eight analyzed locations are higher than the statewide average for similar facilities.

**Table 4-3 Summary of Collision Rates for I-10 Eastbound (7-01-17 through 6-30-20)**

Location	Post Mile	Accident Rate (a/mvm) or (a/mv)*					
		Actual Rate			Average Rate		
		F	F+I	TOT	F	F+I	TOT
Mainline between 16 <sup>th</sup> Street and County Line Road	036.400- R039.159	0.000	0.27	0.78	0.004	0.29	0.88
Off-Ramp to Live Oak Canyon Road*	R036.858	0.000	0.23	0.39	0.008	0.39	1.03
On-Ramp from Live Oak Canyon Road*	R037.160	0.000	0.22	<b>0.67</b>	0.002	0.23	0.63
Off-Ramp to Wildwood Rest Area*	R037.965	0.000	0.00	<b>1.83</b>	0.003	0.25	1.68
On-Ramp from Wildwood Rest Area*	R038.277	0.000	0.00	0.51	0.001	0.08	0.63
Off-Ramp to County Line Road*	R039.016	0.000	0.27	<b>1.07</b>	0.008	0.39	1.03
Mainline between County Line Road off-ramp and on-ramp	R000.000- R000.200	0.000	0.016	0.032	0.002	0.14	0.435
On-Ramp from County Line Road*	R000.230	0.000	0.00	0.00	0.002	0.23	0.63

*a/mvm = accidents per million vehicle miles*

*\*a/mv = accidents per million vehicles (for intersections and ramps)*

*F = Fatal, I = Injury, TOT = Total*

**Boldface** indicates that the actual accident rate is higher than the statewide average.

Source: Caltrans District 8 TASAS Table B, September 2020.

**Table 4-4** summarizes the percentage of by collision type within the Project limits. The primary types of collisions reported within the Project limits for the 3-year period are Side-swipe and Rear-End. These types of collisions are typically related to traffic congestion and speed differentials between passenger cars and slow moving vehicles like trucks.

**Table 4-4 Summary of Collision Types for I-10 Eastbound (7-01-17 through 6-30-20)**

Location	PM	Percent of Accidents By Type								
		Head-On	Side-swipe	Rear-End	Broad-side	Hit-Object	Over-turn	Auto-Ped	Other	Not Stated
Mainline between 16 <sup>th</sup> Street and County Line Road	036.400-R039.159	0.0%	28.5%	54.9%	0.0%	13.2%	1.4%	0.7%	1.4%	0.0%
Off-Ramp to Live Oak Canyon Road	R036.858	0.0%	0.0%	60.0%	0.0%	20.0%	0.0%	20.0%	0.0%	0.0%
On-Ramp from Live Oak Canyon Road	R037.160	0.0%	33.3%	33.3%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%
Off-Ramp to Wildwood Rest Area	R037.965	0.0%	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%
On-Ramp from Wildwood Rest Area	R038.277	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Off-Ramp to County Line Road	R039.016	0.0%	12.5%	87.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mainline between County Line Road off-ramp and on-ramp	R000.000-R000.200	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
On-Ramp from County Line Road	R000.230	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Caltrans District 8 TASAS, September 2020.



**Table 4-5** summarizes the Primary Collision Factors within the Project limits. Improper Turns, Speeding, and Other Violations are the most common Collision Factors.

**Table 4-5 Summary of Primary Collision Factors for I-10 EB (7-01-17 through 6-30-20)**

Location	PM	Percent of Primary Collision Factors									
		HBD	FTC	FTY	IT	ESS	OV	ID	OTD	UNK	FA
Mainline between 16 <sup>th</sup> Street and County Line Road	036.400-R039.159	6.9%	0.7%	0.7%	20.1%	47.9%	20.1%	0.0%	2.8%	0.7%	0.0%
Off-Ramp to Live Oak Canyon Road	R036.858	0.0%	0.0%	0.0%	20.0%	40.0%	20.0%	0.0%	20.0%	0.0%	0.0%
On-Ramp from Live Oak Canyon Road	R037.160	66.7%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Off-Ramp to Wildwood Rest Area	R037.965	0.0%	0.0%	0.0%	50.0%	0.0%	25.0%	25.0%	0.0%	0.0%	0.0%
On-Ramp from Wildwood Rest Area	R038.277	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Off-Ramp to County Line Road	R039.016	0.0%	0.0%	0.0%	12.5%	87.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Mainline between County Line Road off-ramp and on-ramp	R000.000-R000.200	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	0.0%	0.0%	0.0%
On-Ramp from County Line Road	R000.230	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Caltrans District 8 TASAS, September 2020.

Primary Collision Factor Abbreviations:

- |                                |                                |
|--------------------------------|--------------------------------|
| <i>HBD – Influence alcohol</i> | <i>OV – Other violations</i>   |
| <i>FTC – Follow too close</i>  | <i>ID – Improper driving</i>   |
| <i>FTY – Failure to yield</i>  | <i>OTD – Other than driver</i> |
| <i>IT – Improper turn</i>      | <i>UNK – Unknown</i>           |
| <i>ESS – Speeding</i>          | <i>FA – Fell sleep</i>         |

Based on the primary types of collision reported, it can be concluded that these factors are mostly related to traffic congestion, sudden lane changes, and speed differentials between passenger cars and trucks.

The truck climbing lane will provide a dedicated lane for slow moving vehicles to separate them from faster moving passenger vehicles, which is expected to reduce weaving and conflicts; thus improving traffic operations within the Project limits. Likewise, it is expected that the number and severity of accidents will decrease after the Project is constructed.

---

## 5. ALTERNATIVES

### 5A. Viable Alternatives

The viable alternatives evaluated in this report include the No-Build and Build (Preferred) Alternative. The Build Alternative was selected as the Preferred Alternative by the PDT on August 31, 2020.

#### No-Build

The No-Build Alternative would not extend the existing EB truck climbing lane that currently ends at the Live Oak Canyon Road interchange and would maintain the I-10 corridor in its current condition. However, the new I-10/Wildwood Canyon Road Interchange would still be completed after 2030 under a separate project. As local and regional development continues and the traffic demand increases, traffic operational characteristics will further deteriorate which may result in an increase in congestion, vehicle delay, vehicle-operating costs, and vehicle emissions due to reduced operating speeds on the freeway.

There are no capital costs associated with this alternative since no improvements would take place, but it does not address or alleviate the forecasted operational and mobility issues along this segment of I-10. Therefore, it does not meet the Purpose and Need to improve traffic operations, nor does it reduce conflicts between automobiles and slow-moving vehicles.

#### Build (Preferred) Alternative

A description of different features of the Build (Preferred) Alternative is provided below. The engineering plans for the Project layout are included in Attachment B.

#### Proposed Engineering Features

This alternative maintains the existing horizontal and vertical alignments of the eastbound I-10 corridor and includes the following improvements within the limits of the Project:

- Remove the three beam barrier from the median.
- Widen Oak Glen Creek Bridge (Number 54-0648) to close the gap between the EB and WB roadbeds.
- Remove the existing inside asphalt concrete (AC) shoulders from both the EB and WB roadbeds and pave the entire median (36 feet) width with jointed plain concrete pavement (JPCP).
- Adding a concrete barrier to divide the roadbeds and to protect the columns of existing bridge structures at 16<sup>th</sup> Street and Live Oak Canyon Road. The new concrete barrier will join the existing concrete barriers that currently end just west of 16<sup>th</sup> Street, and at the County Line Road interchange bridge.
- Restriping the EB roadbed to provide 3 Mixed Flow Lanes and a TCL.
- Striping of the WB lanes will be refreshed.

- Implementing drainage system upgrades and Best Management Practices (BMPs).

The existing profile grades within the limits of the Project vary between 0.18% and 4.96% for the WB roadbed, and between 0.21% and 4.84% (down grade) for the EB roadbed. The predominant uphill grades along the EB TCL range between 3.41% and 3.75%. Since the EB and WB roadbeds follow separate vertical profiles, the new median concrete barrier will act as retaining structure for the difference in elevation between the roadbeds. Based on the review of as-built plans and preliminary topographic information, the difference in elevation between the roadbeds appears to be less than 3' within the length of the Project. Therefore, the use of concrete median barrier as a retaining structure seems to be appropriate, and no retaining walls are expected to be required between the EB and WB roadbeds.

The east terminus of the TCL Project at the County Line Road Interchange was determined based on the profile grade of the existing EB freeway roadbed. The lane configuration at the east terminus allows the dedicated EB TCL-merge to occur where the longitudinal grade is less than 2%. This lane drop location meets the requirements of logical termini under NEPA and does not conflict with the existing exit ramps.

All features that do not meet Caltrans Highway Design Manual (HDM) standards are discussed in the Nonstandard Design Features section below, and have been documented in the Design Standard Decision Document for this Project approved on May 1<sup>st</sup>, 2019.

#### *Typical Sections*

The paved median will slope away from the concrete barrier at 2 percent on tangent segments to drain water to the outside. Along horizontal curves the applicable superelevation will be applied and will closely match the existing cross slopes. The existing median width will be reduced from 36' to 24' to accommodate the addition of the interior EB lane.

Generally all the EB lanes will be 12' wide with 11' shoulders on either side of the new median concrete barrier. The only exception is at the Live Oak Canyon Road interchange where the existing bridge columns located in the median will be closer to the new Number One Lane. This discussion is also included in the Nonstandard Design Features section.

#### *Right-of-Way*

This segment of I-10 is an access-controlled facility. All the Project improvements will be constructed within the existing State R/W, whose width is predominantly between 170' and 200' but increases at local interchanges, at the Wildwood Safety Rest Area, and at other locations where graded slopes exist.

#### *Drainage*

At certain locations new drainage inlets (DIs) or drainage structures will be constructed along EB I-10 to convey stormwater runoff and to maintain the existing flow patterns. Some runoff will sheet flow onto adjacent unpaved landscaped areas and be treated by new treatment BMPs such as Design Pollution Prevention

Infiltration Areas (DPPIA) and an infiltration basin. No additional runoff will be conveyed to the Wildwood SRRA as a result of I-10 EB TCL Project, due to existing erosion concerns in the area. Existing culvert crossings will be maintained, extended, and realigned as needed. The 11' wide inside shoulders and existing 10' wide outside shoulders will provide the room necessary for regular maintenance of inlets and culvert pipes. The existing and new drainage systems and BMPs are shown in the Project's Preliminary Drainage Report.

The Project watersheds will be similar to the existing watersheds in sizes and design flows to avoid hydrologic diversions. The hydraulic analysis in the Preliminary Drainage Report concluded that with the additional pavement added to the median, the existing systems can adequately drain the excess runoff without any additional major drainage improvements.

The following is a general description of the existing and new drainage features for different segments of the corridor.

- Between the high point located west of 16<sup>th</sup> Street and first horizontal curve east of Live Oak Canyon Road:

From 16<sup>th</sup> Street to Wilson Creek a series of existing drainage inlets and overside drains (OSDs) capture the EB roadbed runoff and convey it to earthen swales that run parallel to the freeway, and that eventually discharge to Wilson Creek. A new OSD will be constructed approximately 2,200' east of 16<sup>th</sup> Street to capture runoff and convey it to the existing swale. From Wilson Creek to the horizontal curve east of Live Oak Canyon Road, the EB roadbed runoff drains to the outside in the tangent portion and then towards the median in the superelevated curve. Currently a swale in the median collects the runoff and conveys it to Wilson Creek. A new drainage system with DIs will be constructed along the median of this segment to capture runoff and outlet to Wilson Creek Channel, thus maintaining the same drainage pattern.

- Between Yucaipa Creek and Wildwood Safety Rest Area:

An OSD will be provided near the EB off-ramp to the Wildwood Safety Rest Area to capture runoff and convey it to a new DPPIA that will be located on the south side of the freeway, between stations 196+00 and 194+00. This DPPIA will be designed to treat low flow for water quality purposes and continue into Wildwood Wash, maintaining current natural drainage flows.

- Between Wildwood Safety Rest Area and County Line Road:

Existing and new OSDs will capture runoff and treat flows through a second DPP Infiltration Area that will be located on the south side of the freeway between stations 211+00 and 222+00. Additionally, a new infiltration basin near station 225+00 will be used for water treatment. Both of these new drainage features will permit runoff to overflow into Wildwood Channel during extreme storm events.

- The recent pavement rehabilitation project (EA 0K293) constructed new drainage inlets in the outside shoulder that will be maintained in place as there are no outside pavement improvements required by this project. Median drop inlets were capped to accommodate temporary traffic control during the pavement

rehabilitation, and reconstructed with final median grading completed in August 2020.

### *Structures*

There is one existing bridge structure that requires inside widening to close the gap in the median, and that is the Oak Glen Creek Bridge (Number 54-0648). This bridge is a three-span reinforced concrete T-beam bridge built in the early 1960's, and its approach slabs were replaced in the early 2000's by another project. All other existing bridge or culvert structures located within the Project limits will adequately accommodate the median improvements.

### *Traffic Operations*

As previously discussed in the Traffic section of this report, for the design year (2045) all the segments within the limits of the Project are improved to LOS B or C in the AM peak hour with the Build Alternative, which is an improvement compared to the LOS D expected under the No-Build Alternative. During the PM peak hour all the segments are improved to LOS D or better compared to the LOS E or F of the No-Build Alternative.

During the AM peak hour, travel time decreases by 12 seconds for passenger cars and six seconds for trucks. Average speed is also improved by three miles per hour for passenger cars and by one mile per hour for trucks. Average delay per vehicle is reduced by 33 percent or seven seconds, while the vehicle hours of delay is reduced by 30 percent or 10 hours.

During the PM peak hour, travel time decreases by approximately two minutes for passenger cars and three minutes for trucks. Average speed is also improved by approximately 20 miles per hour for passenger cars and 16 miles per hour for trucks. Delay per vehicle is reduced by 75 percent or 105 seconds, while the vehicle hours of delay is reduced by 75 percent or 212 hours. Further details are provided in the TOAR for the Project.

### Nonstandard Design Features

Within the limits of the Project, there are locations with design features that do not meet the Caltrans HDM boldface and underlined standards listed below. These design features have been documented in the Project's Design Standard Decision Document (DSDD) approved on May 1<sup>st</sup>, 2019 (see DSDD signed cover page in Attachment N).

#### ***Boldface Standards***

Stopping Sight Distance  
Standards for Superelevation  
Standards for Grade (maximum)  
Lane Width  
Shoulder Width

#### *Underlined Standards*

Decision Sight Distance  
Standards for Grade (minimum)  
Vertical Curves (minimum length)  
Median Standards (minimum width)

Many of these nonstandard features are existing conditions that the Project cannot address due to the limited scope of the Project improvements. To eliminate these

existing nonstandard features, major reconstruction of the freeway would be needed to re-grade, re-profile, and widen the existing facility. These activities would also affect and require reconstruction of the existing ramp alignments, drainage culverts and bridge structures located within the limits of the Project.

In reviewing the collision data for the three-year period between December of 2016 and November of 2019 previously discussed in the Collision Analysis Section of this document, the primary types of collisions within the Project limits are rear end and sideswipe. Most collisions along the mainline have occurred in daylight during afternoon peak hours. The nonstandard boldface or underlined features are not expected to contribute to the collisions previously discussed under the Collision Analysis section. The following narrative provides a brief description and discussion of each nonstandard feature.

### *Boldface Standards*

- **Stopping Sight Distance (SSD):**

Stopping sight distance is defined as the distance needed for drivers to see an object on the roadway ahead and bring their vehicles to a safe stop before colliding with the object. Within the limits of the Project there are six locations along horizontal curves where physical obstructions such as bridge columns, barriers, and vegetation limit the SSD required for the 70 mph design speed. An additional five locations have existing nonstandard SSD along vertical curves, with four located along crest curves, and one located along a sag curve.

Although the SSD for the design speed is not met at these locations, the majority provide a SSD that is slightly above or below the posted speed of 65 mph (62 to 66 mph). It should be noted that the calculation for SSD on vertical crest curves is considered conservative as it uses an object height of 0.5', However, if a 2' object height is assumed (representative of taillight height), the calculated SSD is increased significantly. The reduction in SSD along sag vertical curves is related to the headlight reach during nighttime conditions and can be mitigated with the implementation of street lighting at the sag. The reduction in horizontal SSD occurs along curves for drivers traveling along the inside or outside lanes. The fact that 10' to 11' shoulders are provided next to these lanes provides an opportunity for vehicles to avoid an object located in the travel way by using the shoulders to avoid the object.

- **Standards for Superelevation (SE):**

There are three horizontal curves within the Project limits where the existing superelevation rates of 4% do not meet the standard value of 6.8% required per the HDM based on the existing curve radii of 3,000' and an associated design speed of 70 mph. However, the existing SE rates are compliant with pre-2016 versions of the HDM in which 4% was the standard SE rate for these radii and facility type, and the existing SE rates meet the comfortable speed requirement set forth in Figure 202.2 of the HDM. The median improvements will closely match the existing cross slopes and SE rates to avoid grade break differentials between

adjacent travel lanes. The increased SE rates are typically used to help drain runoff out of the travel lanes quicker and to reduce the flooded area on shoulders. Additional drainage inlets and improvements will be provided to capture the increased runoff resulting from the median paving.

- Standards for Grade (maximum):

Within the Project limits, the I-10 is located in rolling terrain. The existing profile grades just to the east of the 16<sup>th</sup> Street overcrossing exceed the 4% maximum for this type of facility for a length of approximately 300' in both directions. Within this short segment, the existing profile grades are 4.96% in the WB direction and 4.84% in the EB direction. A vertical crest curve on the west end of this segment and a sag curve on the east end of the segment provide transitions to flatter gradients. The steep grades within this segment result in a nonstandard stopping sight distance at the westerly crest curve, which cannot be mitigated unless this segment of the freeway is reconstructed to reduce the profile grades and increase the vertical curve lengths. These extensive modifications are outside the scope of this Project.

- Standards for Lane Width:

Generally 12' wide EB travel lanes are provided for the entire length of the Project, except at the Live Oak Canyon Road bridge overcrossing. At this location, the new Number One Lane will be in close proximity to the bridge columns and the concrete barrier that protects them. At this location, the lane width will be reduced to 11' so that the shoulder width can be increased slightly at the column location. This shoulder width increase results in a slight increase in SSD ahead of the downstream horizontal curve.

- Standards for Shoulder Width:

Similar to the lane width discussed above, 10' wide outside shoulders and 11' wide inside (median) shoulders are provided for the entire length of the Project, except at the Live Oak Canyon Road bridge overcrossing where the inside shoulder is reduced to a width of 4.9' due to the close proximity between Lane Number One (the lane to be placed along the newly paved median) and the concrete barrier protecting the bridge columns.

### *Underlined Standards*

- Standards for Decision Sight Distance (DSD):

The DSD required for a given speed is greater than the SSD to allow drivers time for making decisions without making last minute erratic maneuvers. The lane drop taper for the EB truck climbing lane is located within the limits of an existing vertical crest curve with a SSD below the standard requirement for the design speed of 70 mph. Hence, the DSD along the TCL is also less than the standard requirement when calculated using a 3.5' driver's eye height and a 0.5' object. Since this lane is intended to be used primarily by large trucks however, the driver's eye height would increase to 7.75' (93 inches), which is the average

---

eye height for trucks and other large vehicles per FHWA MUTCD section 5.1.4. Using this value results in a DSD of 1,182' for truck drivers, which exceeds the 1,105' length required for the design speed.

- Standards for Grade (minimum):

The profile for the vertically tangent segment of the freeway between 16<sup>th</sup> Street and the Live Oak Canyon Road interchange includes longitudinal grades of 0.18% for the WB direction of travel and 0.21% for the EB direction. The minimum standard grade required is 0.30% for locations that are not in snow country, which is the case for this segment of I-10. Poor drainage is a potential problem associated with shallow grades. Currently there are existing overside drains and drainage ditches located along the outside of the freeway that collect and convey storm water to the larger regional systems. Since the median paving does not add a significant amount of additional impervious area, the Project proposes to perpetuate and maintain the existing flow patterns. A new drainage system with grate inlets will be constructed along the median for the segment between Wilson Creek and the portion of the horizontal curve east of the Live Oak Canyon interchange to collect runoff from the superelevated EB roadbed.

- Standards for Vertical Curves (minimum length):

The HDM requires a minimum vertical curve length of  $10V$  for algebraic grade differences of greater than or equal to 2% and design speeds greater than or equal to 40, where  $V$  = design speed. This provides adequate sight distance, comfortable driving, and good drainage. An existing 600' long vertical crest curve located along I-10 at 16<sup>th</sup> Street does not meet this standard. This in turn results in a nonstandard SSD along the curve. The same condition applies to a set of existing vertical sag curves located east of 16<sup>th</sup> Street, with lengths of 500' in the WB direction and 600' in the EB direction. Within this segment, the shorter sag curve does not provide the standard SSD but the longer curve does.

- Standards for Median Width (minimum)

The HDM defines the median width as the dimension between the inside edges of travel way. This median should be wide enough to provide for future expansion and/or public transit improvements to address the traffic needs 20 years after construction (design year). The existing median width along this segment of I-10, which was built in the 1960's, is 36'. This width complies with the current minimum standard for freeways and expressways located in urban areas. As part of the Project, the median width will be reduced to 24', which could be considered the "future accommodation" within the median of existing facilities referenced in the HDM. The reduced median width still meets the minimum 22' standard required for facilities under restrictive conditions.

### Interim Features

There are no feasible interim features to be constructed with this Project.



---

### High-Occupancy Vehicle (Bus and Carpool) Lanes

There are no existing High-Occupancy Vehicle (HOV) lanes in this segment of I-10, and none will be added by this Project. As shown in Section 4B, Regional and System Planning, a separate project (ID 4H01003) proposed to add one HOV lane in each direction of I-10 from Ford Street in Redlands to the Riverside County Line in Calimesa. However the project is shown as cancelled in the RTP/SCS amendment #3 dated September 6, 2018.

### Ramp Metering

The existing on-ramps in this segment of I-10 are not metered, and this feature will not be added by this Project. As shown in Section 4B, Regional and System Planning, a separate project (EA 0P260) proposes to install traffic monitoring stations at Live Oak Canyon Road and County Line Road that will later become ramp metering systems.

### California Highway Patrol (CHP) Enforcement Areas

Currently there are no existing CHP enforcement areas within this segment of I-10, and none will be added by this Project. It is unknown if these features will be added as part of the planned projects discussed in Section 4B or any other future projects.

### Park-and-Ride Facilities

Currently there are no existing park-and-ride facilities in this segment of I-10, and none will be constructed as part of this Project. It is unknown if any are proposed within the Project limits as part of the planned projects discussed in Section 4B or any other future projects.

### Utilities and Other Owner Involvement

A preliminary utility research was conducted during the current PA/ED phase of the Project. The research involved retrieving Dig Alert reports for the Project area, contacting and obtaining utility maps and asbuilts from different private and public agencies, and retrieving information from previous studies and projects located in the same area. The following list presents the existing overhead and underground public utilities located within the Project limits.

#### *Dry Utilities*

- Electric: Southern California Edison
- Gas: Southern California Gas Company
- Telecom Lines: AT&T, Frontier Communications, Time Warner Cable, Verizon

#### *Wet Utilities*

- Sewer: Yucaipa Valley Water District
- Water: Western Heights Water Company, Yucaipa Valley Water District

These utilities are generally located along local streets adjacent to the I-10 mainline. There are a few locations where some of these utilities traverse the freeway underground or along the bridge overcrossings.

One of the future projects mentioned in Section 4B of this report (EA 38423) will install fiber optic within the limits of this Project, with conduits crossings the freeway at minimum depths of 36-inches. Since the structural section for median paving has a total depth of 1.95' and requires shallow excavations, no impacts are anticipated to the existing or planned utilities.

#### Railroad Involvement

No railroad agencies will be involved since there are no existing railroad facilities within or immediately adjacent to the Project.

#### Highway Planting

The Project improvements are specific to the paving of the existing median, signing and striping for the EB roadbed, and associated minor drainage modifications. Due to the limited scope of these improvements, no highway planting is included as part of this Project. However, if the existing irrigation facilities, trees or landscaping within the Project limits are removed or damaged during construction, replacements will be installed at a rate, size, and location determined by the District Landscape Architect, and the irrigation system shall be restored.

#### Erosion Control

According to the Caltrans District 8 Work Plan, Fiscal Year 2018 – 2019, Interstate 10 is not listed as a road segment prone to erosion. The Project consists primarily of work within the I-10 median, which is flat and narrow. Erosion control measures will be considered as appropriate to minimize the need for maintenance and to assure compliance with storm water quality requirements.

There are no hills or slopes that would be disturbed apart from the slopes within the new Design Pollution Prevention Infiltration Areas (DPPIA), the side slopes of a new infiltration basin, and existing side slopes that will be minimally disturbed for the construction of new overside drains.

Runoff control during construction will be achieved with gravel bag berms placed along the downstream perimeters of the work area or median. The duration that disturbed areas are left exposed will be minimized to the extent practicable. Temporary barriers will be used to divert runoff around disturbed areas. Temporary drainage inlet protection will be installed at storm drain inlets and other drainage conveyance systems along the EB roadway that collects runoff from the median. For final Notice of Termination from the Regional Water Board, permanent erosion control will be required on all disturbed soil including staging areas and storage yards.

---

### Noise Barriers

According to the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772), this Project is classified as a Type I Project because it will add a truck climbing lane on EB I-10. A noise analysis is required for all Type I projects. A Type I project is defined in 23 CFR 772 as follows:

*“Proposed federal or federal aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway, which changes either the horizontal or vertical alignment or increases the number of through-traffic lanes.”*

A total of 76 representative sensitive receptors were modeled and evaluated for potential noise impacts resulting from the Project. After careful review of the existing and proposed conditions, the cost allowance and the cost of abatement, it was determined that none of the noise barriers evaluated were economically reasonable. Detailed information about the analysis and findings are included in the Noise Study Report (NSR) and Noise Abatement Decision Report (NADR) prepared for the Project.

### Nonmotorized and Pedestrian Facilities

These types of facilities are not typically found on freeways in this region. That is not the exception for this segment of I-10, which does not have existing or planned non-motorized and pedestrian facilities. The Wildwood Safety Roadside Rest Area (SRRA) is the only existing facility that pedestrians commonly use; but this Project does not intend to make any changes to the SRRA.

### Needed Roadway Rehabilitation and Upgrading

This freeway facility is over fifty years old, and the existing concrete slabs show signs of wear and tear (cracking, spalling, etc.) due to aging and the heavy traffic volumes along this corridor. As discussed in Section 4B, a separate rehabilitation project (EA 0K293) was completed in August 2020 to replace the existing two outermost slabs and shoulders for both directions of travel in this segment of I-10, and the work will be completed before the construction begins for this Project.

### Needed Structure Rehabilitation and Upgrading

Aside from the widening of the Oak Glen Creek Bridge to close the gap between the EB and WB roadbeds, no other rehabilitation or upgrading of existing structures will be provided by this Project.

### Cost Estimates

The current overall Project capital outlay cost is estimated to be \$20.33 million and \$24.74 million escalated. A summary of major cost elements is provided in the table below. This includes the median roadway improvements, signing and striping for the median and EB roadbed, and the bridge structure widening at Oak Glen/Wilson Creek to close the existing gap between the WB and EB roadbeds. Minor to no utility

relocations are expected as only a few utilities cross the freeway, and the paving of the median only requires shallow excavations. A detailed breakdown of this estimate is provided in Attachment C of this report.

**Table 5-2 Preliminary Cost Estimate**

<b>Preliminary Estimate</b>	<b>Current</b>	<b>Escalated</b>
Roadway	\$18,593,400	\$22,621,714
Structures	\$1,738,800	\$2,115,516
Right of Way	\$0	\$0
Total	\$20,333,000	\$24,738,000

Right-of-Way Data

R/W acquisitions are not required by this Project as all of the improvements will be constructed within the existing State R/W. One potential staging area was identified on vacant State R/W southwest of the 16th Street Overcrossing. The approved Right of Way Data Sheet is included in Attachment E of this report.

Effects of Projects-Funded-by-Others on State Highway

The San Bernardino County Transportation Authority is the Project Sponsor, and funding will be provided by a combination of local, State and Federal funds. Caltrans will provide oversight through the construction phase of the Project. The Project is aimed to reduce traffic congestion and accidents associated with slow moving trucks in the Project area by providing a dedicated truck climbing lane, improving both local traffic flows and overall freeway operations in the EB direction of I-10. The Project will improve travel time and speed along the corridor, and will provide bottleneck relief within the Project limits, allowing volume served to increase while still improving operations along I-10.

**5B. Rejected Alternatives**

The previous PSR-PDS discussed a single build alternative and did not consider other alternatives such as outside widening or combination of outside/inside widening. Likewise, this Project Report will not evaluate other alternatives as they are deemed not suitable for this Project due to the extensive work and impacts that they create, and because the median improvements avoid most of the impacts associated with those alternatives. These additional impacts include, but are not limited to:

- A greater Project footprint that significantly increases the environmental study areas and the review and approval process associated with it
- The need to offset and realign the on and off-ramps of the local interchanges and at the Wildwood Safety Rest Area
- Widening or replacement of existing bridge structures
- New bridge structures for the realignment of the EB off and WB on-ramps of the Live Oak Canyon Road interchange
- Extension of existing drainage culverts crossing under the I-10 and new drainage systems
- Utility relocations and right of way acquisitions

- Higher construction costs
- Extensive earthwork, especially at the hill located on the south side of I-10 east of Wildwood Creek
- Longer duration for construction and impacts to the traffic operations of the freeway and local interchanges
- Longer periods for review and approval of engineering plans

## 6. CONSIDERATIONS REQUIRING DISCUSSION

### 6A. Hazardous Waste

An Initial Site Assessment (ISA) was prepared and approved for this Project in August of 2018. An ISA Update Memorandum (ISA Update Memo) was also prepared in June 2020. The ISA checklist is included in Attachment K of this report.

#### *Sites of Concern*

According to the ISA and ISA Update Memo, no recognized environmental conditions (REC), historic RECs (HREC), or controlled RECs (CREC) were identified within the Project limits. However, 18 adjacent properties were identified to have a low to moderate potential of impacting the Project under the Build Alternative, including 2 HREC sites and 1 REC site.

The two HREC sites are Unocal 76 Station #5636 and Jorco Chemical Company. These two HREC sites have a low hazard ranking because remediation activities have been completed and the leaking underground storage tanks (LUST) cases involving each facility have been closed. As a result, it is anticipated the two HREC sites would have a low potential of impacting the Project.

The ISA and ISA Update Memo had identified Sorensen Engineering as a REC site. Although this REC site is currently open and being assessed, it has a moderate hazard ranking because groundwater flows northeast away from the Project corridor in the vicinity of the Sorensen facility. As a result, it is unlikely the Project would encounter any off-site migration of groundwater contamination associated with this facility. No work associated with the Project will occur at the HREC and REC properties. As a result, these sites were found to have a low to moderate potential to adversely affect the Project.

#### *Other Conditions of Concern*

Hazardous wastes and materials may be encountered during construction activities for the Build Alternative. Hazardous materials would be properly handled, contained, transported, and disposed of in compliance with applicable regulations and requirements, which may include the Resource Conservation and Recovery Act (RCRA), the Clean Air Act, the Clean Water Act (CWA), the California Department of Toxic Substances Control (DTSC).

Environmental Health Standards for the Management of Hazardous Waste, the provisions of the San Bernardino County Fire Department Hazardous Materials Division, and United States Department of Transportation (USDOT) hazardous

materials regulations. Measures HAZ-1 through HAZ-3 in the Environmental Document (ED) describe efforts that will be made to avoid or minimize adverse effects with known or suspected hazardous materials and wastes during construction.

#### *Asbestos-Containing Materials*

Project construction will require disturbance activities, including median paving, of the Oak Glen Creek Bridges (Bridge No. 54-0648L and 54-0648R) to accommodate the widening of I-10.

According to *Asbestos and Lead-Based Paint Testing Results* (Caltrans 2019f), asbestos containing materials (ACM) were detected beneath bolts associated with the guardrail bolts in Bridge No. 54-0648L and atop bolts associated with the guardrail bolts in Bridge No. 54-0648R. Any work that would physically impact ACMs would be conducted in accordance with Caltrans' standard special provision (SSP) 14-11.16, Asbestos-Containing Construction Materials in Bridges, South Coast Air Quality Management District (SCAQMD) Rule 1403, and National Emission Standards for Hazardous Air Pollutants (NESHAP) (Measure HAZ-1 within the ED).

#### *Treated Wood Waste*

There is a potential the Project may require the removal of treated wood in the supports of the median guardrails and signage posts along the Project corridor. Treated wood objects removed from the Project corridor are classified as treated wood waste (TWW). The removal of any TWW would be conducted in accordance with Chapter 34 of the Title 22 CCR Section 67386.1 through 67386.12 (Measure HAZ-2 within the ED).

#### *Lead Content*

Based on the findings of the aerially deposited lead (ADL) investigation, ADL was not detected along the corridor within the Project limits. In addition, according to the *Asbestos and Lead Based Paint Testing Results* (Vista Environmental Consulting 2019), no surface coatings on the existing bridges were found to contain lead concentrations that would be defined as lead based paint. Traffic striping tested within the Project limits as part of the *Asbestos and Lead Based Paint Testing Results* were not detected at concentrations that would qualify as hazardous waste. With the implementation of a Lead Compliance Plan (LCP) as identified in Measure HAZ-3 in the ED, protections will be in place to minimize work exposure to lead content. The LCP would be prepared by a Certified Industrial Hygienist and in accordance with Title 8 CCR Section 1532.1.

#### *Routine Facility Maintenance*

Routine maintenance activities during operation of the Build Alternative will be required to follow applicable regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, the operation of the Project will not result in adverse direct or indirect permanent impacts related to hazardous waste or materials.

## **6B. Value Analysis**

The PSR recommended the current Build Alternative as the most viable option to be studied in the current PA/ED phase because it minimizes the Project cost, schedule, and impacts. The Project Delivery Team (PDT) agreed with that recommendation and a Value Analysis (VA) study was not conducted because any other options would result in additional impacts, cost, delays to the Project schedule; and the recent rehab constructed the pavement section in the outside EB lane for heavy vehicle loading. Additionally, the Project is below the \$50M Federal VA threshold.

## **6C. Resource Conservation**

Since the new TCL will improve traffic operations and reduce travel times for this segment of EB I-10, an overall reduction in fuel consumption and emissions is expected to result from these improvements. During construction, all the work will be confined to the available median space, and the impacts to traffic operations should be minimal.

Existing asphalt pavement can be ground up and used as new base material or sold to local material vendors. Clean concrete rubble may also be crushed and combined with new materials for reuse in base or minor concrete as appropriate. Sign panels and sign posts can be reused if in optimal condition. The existing metal thrie beam barrier can be removed and transported to a Caltrans District 8 Maintenance Yard, where it may be considered for salvage and reuse. Low energy consumption devices will be installed as necessary (e.g. LED lighting).

## **6D. Right-of-Way Issues**

### Right-of-Way Required

Since this Project consists mainly of median improvements, all work will be completed within the existing R/W, and no temporary construction easements or permanent acquisitions are required. One potential staging area was identified on vacant State R/W southwest of the 16th Street Overcrossing. All temporary construction easements previously considered by the Project were removed since no R/W adjacent noise barriers are being constructed by the Project and there is adequate area within the work zone to stage equipment and materials. As previously discussed in other sections of this report, relocation of existing utilities is not anticipated. No coordination with railroad agencies is needed since there are no railroad facilities within the limits of the Project. The approved Right of Way Data Sheet for the Project is included in Attachment E.

### Relocation Impact Studies

This Project will not displace any person or business since all the improvements will be completed within the existing R/W.

### Airspace Lease Areas

Airspace lease areas have not been assessed for this Project.

## **6E. Environmental Compliance**

The Project is subject to both State and Federal environmental review requirements because federal funds may be used to cover part of the Project costs. Project documentation has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under both CEQA and NEPA.

An IS-MND has been prepared for CEQA, and an EA-FONSI for NEPA. The IS-MND/EA-FONSI has been prepared in accordance with Caltrans' environmental procedures, as well as State and Federal environmental regulations. The IS-MND/EA-FONSI was signed on November 10, 2020 (see Attachment L).

### Wetlands and Flood Plains

Construction activities related to the installation of bridge piers within Wilson Creek will result in direct temporary impacts on California Department of Fish and Wildlife (CDFW) jurisdictional areas and a permanent loss of 0.01 acre of non-wetland USACE jurisdictional waters, 0.05 acre of CDFW unvegetated streambed, and 0.03 acre of CDFW riparian vegetation. Since the loss of waters of the U.S. would be less than 0.10 acre and would not include wetlands, these effects would not be considered substantial, and no compensatory mitigation was included. Based on the low function of this habitat, a compensatory mitigation ratio of 1:1 for permanent loss of CDFW jurisdiction is recommended. This compensatory mitigation will also mitigate for Project impacts on waters regulated by RWQCB.

The implementation of Measures NC-1 through NC-4 described in Section 2.19 of the IS-MND/EA-FONSI will protect off-site waters from inadvertent impacts during construction. In addition, the implementation of Measure WET-1 described in section 2.20.4 of the IS-MND/EA-FONSI will reduce Project impacts on wetlands and other waters within and/or adjacent to work areas. Improvements to the Wilson Creek Bridge will have a minimal effect on floodplains and will not increase the extent of the floodplain. Therefore, the Project will not constitute a significant floodplain encroachment as defined in 23 CFR 650.105(q) and is classified as minimal encroachment.

### Other Environmental Discussion

An Environmental Certification will be required at the end of the PS&E phase. A revalidation of the environmental document may be needed if changes in project scope or alternatives occur; or if environmental laws, regulations, or guidelines



change during the PS&E phase.

## **6F. Air Quality Conformity**

The Project is in the San Bernardino County portion of the South Coast Air Basin. The Project is included in the 2019 Federal Transportation Improvement Program (FTIP) and the Southern California Association of Government's (SCAG) 2016-2040 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) for San Bernardino County with Project ID 20179901.

An Air Quality Report was completed for the Project on April 5, 2019. The Project is located in a federal nonattainment area for PM<sub>2.5</sub> and in an attainment/maintenance area for PM<sub>10</sub> and CO; thus, a project-level hot-spot analysis is required under 40 CFR 93.109. The Project complies with all PM<sub>2.5</sub> and PM<sub>10</sub> measures in the State Implementation Plan (SIP) and implements measures relied upon in the RTP/TIP regional conformity analysis in a timely manner. The Project does not cause or contribute to any new localized CO, PM<sub>2.5</sub>, and/or PM<sub>10</sub> violations or delay timely attainment of any NAAQS or any required interim emission reductions or other milestones during the timeframe of the transportation plan (or regional emissions analysis).

FHWA released updated guidance (FHWA 2016) for determining when and how to address mobile source air toxic (MSAT) impacts in the NEPA process for transportation projects. MSAT analysis indicates that a substantial decrease in MSAT emissions can be expected between the existing (2017) and future (2025 and 2045) No-Build Conditions. When compared with the No-Build Conditions, 2025 and 2045 Build Alternative, MSAT emissions would remain unchanged or increase by 0.1 pounds per day. Thus, the No-Build Alternative would not have substantial adverse impacts with regard to MSAT. The report also concluded that the Build Alternative is projected to result in a marginal increase in daily regional emissions due to capacity expansion and subsequent increases in vehicle miles traveled (VMT) along the Project corridor.

In conclusion, Alternative 2 (Build Alternative) will have no substantial permanent impacts on air quality and will not result in substantial adverse impacts on air quality. On September 16, 2020 the Air Quality Conformity analysis was submitted to the FHWA. A Conformity Determination Letter for the Project from FHWA was received on October 16, 2020.

## **6G. Title VI Considerations**

Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color or national origin in programs or activities receiving federal financial assistance. Federal-aid recipients, sub-recipients and contractors are required to prevent discrimination and ensure nondiscrimination in all of their programs, activities and services whether these programs, activities and services are federally funded or not. Caltrans and the Federal Highway Administration (FHWA) policies demonstrate a commitment to Title VI of the Civil Rights Act of 1964.

Due to the nature of the Project and that the construction work is generally confined

to the median of I-10 freeway, there are no pedestrian, bicycle, or public transportation facilities that will be affected by the Project. This includes the Wildwood Safety Roadside Rest area, which will remain fully operational and accessible to the public during construction of the Project.

### **6H. Life-Cycle Cost Analysis**

A life-cycle cost analysis (LCCA) report was prepared for the Project and approved on March 26, 2019. Life cycle costs include initial construction costs, maintenance costs, and user costs due to future closures for maintenance operations.

The pavement alternatives considered by the report for mainline construction included 40-year JPCP and 40-year continuously reinforced concrete pavement (CRCP). For shoulder construction, JPCP was considered to match mainline pavement and adjacent shoulder pavements. Materials costs were estimated using data from Caltrans Contract Cost Data (2018) for projects within the last three years, adjusted average pricing, using similar material quantities, and within Caltrans District 8 where possible. Caltrans requires that documentation be provided wherever the alternative with the lowest life cycle cost is not selected. For this Project, no deviations are recommended from selecting the alternative with lowest life cycle cost. Out of the three alternatives for pavement structural sections analyzed by the LCCA, the one presented in Table 6-4 is recommended for design. The LCCA report is included in Attachment G.

**Table 6-4 Recommended Pavement Structural Sections**

<b>Selected Alternative</b>	<b>Pavement Composition (feet)</b>
Mainline 3	1.00 CRCP over 0.25 HMA-A over 0.70 AS Class 2
Shoulder	0.90 JPCP over 1.05 AB Class 2

### **6I. Reversible Lanes**

Reversible lanes are not considered feasible for this Project due to the difference in elevations between the EB and WB roadbeds of the I-10 mainline, the uphill grade in the EB direction of travel, and the existence of columns in the freeway median supporting the bridges at the 16<sup>th</sup> Street and Live Oak Canyon Road overcrossings.

## **7. OTHER CONSIDERATIONS AS APPROPRIATE**

### Public Hearing Process

The Draft IS/EA and Notice of Completion (NOC) were posted on the State Clearinghouse website on July 3, 2020, which signaled the start of public circulation for the Draft IS/EA. A Notice of Availability (NOA) of the Draft IS/EA for the Project was published in the News Mirror’s online publication on July 3, 2020. The NOA was also published as a display ad in the San Bernardino Sun newspaper’s Sunday edition on July 5, 2020, to improve the public outreach effectiveness of the circulation notice, as well as in the La Prensa newspaper on July 10, 2020. The ad published in the La Prensa newspaper was included for equity purposes, and to

---

provide information regarding the opportunity for public comment on the Draft IS/EA and the availability of a Public Hearing for the Spanish speaking population in the Project area. The publication date of La Prensa newspaper ad was used to dictate the end date of the public circulation period. The 30 calendar day public circulation period, which originally ended on August 3, 2020, was extended to August 10, 2020. As a result, the Draft IS/EA was circulated for public review for a total of 38 calendar days, from July 3, 2020 to August 10, 2020.

Copies of the Draft IS/EA were distributed to the State Clearinghouse and other Federal, State, and local agencies. Hardcopies of the Draft IS/EA were made available for public review at the SBCTA main office, City of Yucaipa Public Works, and electronically on the SBCTA I-10 Truck Climbing Lanes Project Website ([gosebcta.com/i10truckclimbing](http://gosebcta.com/i10truckclimbing)). A virtual public hearing was held on Wednesday, July 15, 2020, from 6:00pm to 7:00pm. The public hearing was held virtually in consideration of social distancing and public health and safety related to the COVID-19 pandemic.

During the public circulation period of the Draft IS/EA, nine comments were received. One of these comments was received outside of the public circulation review period. Comments received after the close of the public circulation period on August 10, 2020, were accepted through August 12, 2020. One comment was from a Federal agency (United States Environmental Protection Agency [US EPA]), two from regional agencies (SCAQMD and the Regional Water Quality Control Board [RWQCB]), one from a local agency (County of San Bernardino Public Works), and five from the public. Two comments from the public were in support of the Project, and from the remaining three two were duplicates and these comments were to express concern about the additional noise that the Project could generate. The comments received during the public circulation period and the corresponding responses are provided in Appendix I of the IS-MND/EA-FONSI.

After the public circulation period, all comments were considered and addressed prior to the PDT selecting the Preferred Alternative. The PDT identified the Build Alternative as the Preferred Alternative on August 31, 2020, after careful consideration of all contributing factors and because it best satisfies the purpose and need of the Project. SBCTA, as the Project sponsor, supports this decision.

### Route Matters

#### *Freeway Agreements and New Connections*

I-10 freeway is an existing access-controlled route and the Project does not propose any new connections or permanent closures of the existing local roads. Update of the current freeway agreement has been deferred to project EA 1K090 I-10/Wildwood Canyon Road interchange that will be proposing an access control modification for a new public road connection to I-10. EA 1K090 is in the planning stage and Project Initiation Document is expected to be approved by November 2020.

#### *Route Adoptions*

According to the Caltrans PDPM route adoptions are required for any of the

following situations:

- A new alignment for an existing route
- Establishment of a location for an unconstructed route
- Conversion of a conventional highway to a freeway or a controlled access freeway
- Designating a traversable highway
- Temporary connections

Since this criteria does not apply to this Project, there are no route adoptions needed.

*Relinquishments*

The Project does not include the removal of a State Highway (either in whole or in part) from the State Highway System (SHS). Therefore, there are no relinquishments required by this Project.

Permits

The regulatory permits, reviews and approvals listed in the table below would likely be required for the construction of the Project.

**Table 7-1 Project Permits and Approvals**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
California Department of Fish and Wildlife	1602 Streambed Alteration Agreement	To be submitted after approval of Project Report and Final Environmental Document.
Regional Water Quality Control Board	Clean Water Act Section 401 Water Quality Certification Section 402 NPDES	To be submitted after approval of Project Report and Final Environmental Document.
San Bernardino County Flood Control District	Encroachment Permit	To be submitted after approval of Project Report and Final Environmental Document.
U.S. Army Corps of Engineers	Clean Water Act Section 404 Nationwide Permit	To be submitted after approval of Project Report and Final Environmental Document.

Since work will occur within the existing State right-of-way, the following two NPDES permits would be required by the Project:

- NPDES General Permit, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No.2009-0009-DWQ- NPDES No. CAS000002), as amended by Order No. 2010 0014 DWQ and Order No. 2012 0006 DWQ. This permit will be used because you are doing work within State right of way. Regional Water Quality Control Board.
- National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit and Waste Discharge Requirements for the State of California, Department of Transportation (Order Number 2012-0011-DWQ, NPDES No. CAS00003, adopted on September 19, 2012 and effective on July 1,

2013), as amended by Order No. 2014 0006 EXEC (effective January 17, 2014), Order No. 2014 0077 DWQ (effective May 20, 2014) and Order No. 2015 0036 EXEC (effective April 7, 2015).

### Cooperative Agreements

SBCTA and Caltrans executed an agreement on July 28, 2017 for purposes related to the PA/ED phase of the Project. The agreement will be continued for the review and design oversight during the PS&E and construction phases of the Project.

Caltrans is the Lead Agency under the California Environmental Quality Act (CEQA) as well as the Lead Agency under the National Environmental Policy Act (NEPA), as assigned by the Federal Highway Administration (FHWA), in accordance with NEPA (42 United States Code [USC] 4321 et seq.); and the Council on Environmental Quality (CEQ) Regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508).

### Other Agreements

Besides Caltrans and SBCTA, the City of Yucaipa is another stakeholder that is also involved with the development of the Project. Although no formal agreements exist, the City's staff has been contacted on a regular basis to keep them updated on the progress of the Project.

### Report on Feasibility of Providing Access to Navigable Rivers

There are no navigable rivers within the limits of the Project or in the immediate vicinity.

### Public Boat Ramps

Not applicable to this Project for the same reason mentioned above.

### Transportation Management Plan

A Transportation Management Plan (TMP) data sheet has been prepared as part of the PA/ED phase of the Project. Some of the key elements recommended in the TMP include the following:

- Public Information/Public Awareness Campaign
- Motorist Information Strategies
- Incident Management
- Construction Strategies
- Demand Management
- Alternative Route Strategies
- Other Strategies

The conceptual staging and traffic handling is discussed in the next section below. The TMP Data Sheet for the Project is provided in Attachment F.

Stage Construction

A detailed stage construction plan will be created during the PS&E phase to minimize the impacts to freeway operations; however, a conceptual staging sequence is described below:

- Prior to commencing the work, the appropriate construction and temporary signs will be installed to inform and warn motorists about the construction activities that will be taking place.
- Then temporary striping will be applied on both directions of travel to reduce the lane widths and shift them to the outside. The temporary striping configuration will provide 11' for Lanes #1 and #2, 12' for Lane #3 and 8' for outside shoulders. This will provide the room necessary to install k-rail on either side of the median to protect the construction work area.
- With the k-rail in place, the construction of the bridge widening at Oak Glen Creek Bridge can be started concurrently with the work to remove the asphalt shoulders, the thrie beam, and the clearing and grubbing of the median.
- Once the median is clear, the rough grading and installation of the new concrete barriers can be started, followed by the installation of any new drainage systems, final grading, and the construction of new base material and concrete pavement between the new concrete barrier and the edge of existing concrete slabs.
- Lastly the k-rail can be removed, and the final signing and striping will be installed for both directions of travel.

Any new BMPs, drainage modifications, and other construction activities on the outside of the freeway can be done concurrently with any of the above work items.

Accommodation of Oversize Loads

The existing bridges with limited vertical clearances along I-10 through the Project limits are summarized in the table below. The table also shows if the interchanges provide a direct bypass to the overcrossing structure. In addition to the overcrossing bridges, there are no existing overhead sign structures along I-10 within the Project limits with a restricted vertical clearance.

**Table 7-2 Existing Overcrossing Structures**

County Post Mile	Structure Name	Vertical Clearance (ft)	Bypass
SBD-36.44	16 <sup>th</sup> Street OC	16.7	Bypass Available along Outer 10 Highway South between Yucaipa Blvd and Live Oak Canyon Rd
SBD-R37.03	Live Oak Canyon Road OC	18.8	Bypass Available along Calimesa Blvd between Live Oak Canyon Rd and County Line Rd

Source: Caltrans California Log of Bridges on State Highways

It should be noted that there are traffic signals, overhead lines and service drops along the adjacent bypass roads within the Project limits that would have to be considered if

an oversize load is moved through these alternate routes.

### Graffiti Control

For the median improvements of I-10, the development of a graffiti removal specification is not anticipated to be required but this will be further evaluated during the PS&E phase.

### Asset Management

There are no outstanding issues carried over from the PSR phase of the Project that would require discussion.

### Complete Streets

Since the Project is located along an accessed-controlled freeway facility, the Complete Streets program does not apply to this Project.

### Climate Change Considerations

The Project is listed in SCAG's 2016-2040 RTP/Sustainable Communities Strategy and is not considered a major project in terms of energy consumption, as the difference in energy consumption between the Build and No-Build conditions is not considered to be substantial. Therefore, an energy analysis was not prepared.

The Project is intended to reduce traffic congestion and delays along this segment of I-10, which is expected to result in a reduction in vehicle hours traveled, carbon dioxide emissions, and improved traffic flow. Given that the Project is located along an accessed-controlled freeway facility, there are no existing or proposed facilities for pedestrians and bicyclists.

### Broadband and Advance Technologies

According to Caltrans' website for wired broadband facilities on State Highway right of way, California Governor's Executive Order S-23-06 Twenty-First Century Government directed the establishment of the California Broadband Task Force, of which Caltrans is a member, to bring together public and private stakeholders to better facilitate broadband installation, identify opportunities for increased broadband adoption, and enable access to and deployment of new advanced communication technologies.

The preliminary utility research during the PSR and PA/ED phases identified the existence of intercontinental fiber optic (FO) lines in the vicinity of the Project. On the west side of the Project the lines run along Outer 10 Highway South, cross under I-10 approximately 820' west of 16<sup>th</sup> Street and continue along Dunlap and Calimesa Boulevard.

As discussed in previous sections of this report, one of the future projects (EA 38423) will install additional fiber optic lines within the limits of this Project with conduits crossing below the I-10 freeway at minimum depths of 36-inches. Traffic monitoring stations will be installed by the same project at the Live Oak Canyon Road and

County Line Road interchanges. No impacts are anticipated to the existing or planned facilities.

Other Appropriate Topics

There are no other appropriate topics that would influence the approval of the Project.

**8. FUNDING, PROGRAMMING AND ESTIMATE**

Funding

It has been determined that this Project is eligible for Federal-aid funding. The Project may be funded by a combination of local, State, and Federal funds. Other Project funding sources include San Bernardino County Measure I and State Transportation Improvement Program (STIP) Regional Improvement Program (RIP).

Programming

The Project is included in the Southern California Association of Governments (SCAG) project listing of the Final 2019 Federal Transportation Improvement Program (FTIP) with Project ID 20179901. The following table provides the information for current programmed dollar amounts.

**Table 8-1 Project Programmed Dollar Amounts**

Fund Source 20.XX.###.###	Fiscal Year Estimate								
	Prior	Current	18/19	19/20	20/21	21/22	22/23	Future	Total
Component	In thousands of dollars (\$1,000)								
PA/ED Support	1,706								1,706
PS&E Support			2,890*						2,890
Right-of-Way Support									
Construction Support									
Right-of-Way Construction				30,000**					30,000
Total	1,706		2,890	30,000					34,596

Notes:

\* Programmed for 18/19, but SBCTA received a time extension for this RIP fund until February 2021.

\*\* The Project was funded with local funds in FY 19/20, but funds will be moved to FY 21/22 to reflect the updated Project schedule.

Based on the current Project cost estimate, the support cost ratio is 33%.

Estimate

The current overall Project capital outlay cost is estimated to be \$20.33 million and \$24.74 million escalated. The major cost items include the pavement structural



section, concrete barrier, and associated drainage items. The complete Project Cost Estimate is provided under Attachment C.

## 9. DELIVERY SCHEDULE

The following table has the current key dates for the Project delivery schedule.

*Table 9-1 Project Delivery Schedule*

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	4/27/2017	Actual
BEGIN ENVIRONMENTAL	M020	9/29/2017	Actual
CIRCULATE DPR & DED EXTERNALLY	M120	6/29/2020	Actual
PA/ED	M200	11/16/2020	Target
RIGHT OF WAY CERTIFICATION	M410	12/29/2021	Target
READY TO LIST	M460	12/29/2021	Target
AWARD	M495	4/6/2022	Target
APPROVE CONTRACT	M500	6/17/2022	Target
CONTRACT ACCEPTANCE	M600	12/26/2023	Target
END PROJECT EXPENDITURES	M800	6/26/2024	Target
FINAL PROJECT CLOSEOUT	M900	7/1/2025	Target

## 10. RISKS

Based on the Project capital cost estimate and non-complexity, a Risk Register with deterministic risk analysis has been created and attached as Attachment H.

## 11. EXTERNAL AGENCY COORDINATION

Coordination with the following agencies is expected to be required for the Project.

### Federal Highway Administration (FHWA)

Per the Current Stewardship and Oversight Agreement (Agreement) between the California Department of Transportation (Caltrans) and Federal Highway Administration (FHWA), dated May 28, 2015, this Project is considered to be a Delegated Project. However, should any future situation/circumstance that will potentially classify the Project as a Project of Division Interest arises, Caltrans shall notify FHWA and reassess this Project using the Project of Division Interest selection criteria outlined in the Agreement. This Project Report has been reviewed by the Caltrans' FHWA Liaison, Sergio Avila, on September 14, 2020, and is eligible for federal aid.

### San Bernardino County Flood Control District

Encroachment Permit for field activities.

Riverside County Transportation Commission (RCTC)

Coordination may be required with the Riverside County Transportation Commission for the design of the truck climbing lane eastern terminus at the County Line Road interchange for compatibility with the future TCL to be completed by RCTC between County Line Road and the I-10/SR-60 interchange.

US Army Corps of Engineers (ACOE)

To obtain Section 404 Permit and confirm that Section 408 Permit is not required.

Santa Ana Regional Water Quality Control Board (SARWQCB) and State Water Resources Control Board (SWRCB)

To obtain Section 401 Water Quality Certification permit and Section 402 NPDES permit.

California Department of Fish and Wildlife (CDFW)

To obtain Section 1602 Approval and Permit.

**12. PROJECT REVIEWS**

District Maintenance	<u>James Lan</u>	Date <u>4/29/2020</u>
Headquarters Project Delivery Coordinator	<u>Luis Betancourt</u>	Date <u>4/28/2020</u>
Project Manager	<u>Ferry R. Fard</u>	Date <u>10/16/2020</u>
District Design Liaison/FHWA Liaison/ADA	<u>Sergio Avila</u>	Date <u>9/14/2020</u>
District Safety Review	<u>Kevin Chen</u>	Date <u>4/04/2019</u>
Constructability Review	<u>Sadique Hossain</u>	Date <u>5/05/2020</u>
Design Oversight	<u>Aysha Habib</u>	Date <u>5/11/2020</u>

### 13. PROJECT PERSONNEL

*Table 13-1 Project Personnel*

<b>Organization</b>	<b>Name</b>	<b>Title</b>	<b>Phone #</b>
SBCTA	Paula Beauchamp	Director of Project Delivery	909-884-8276
SBCTA	Paul Melocoton	Project Manager	909-262-9973
SBCTA	Dennis Saylor	Project Manager	909-884-8276
Caltrans	Ferry R. Fard	Project Manager	909-501-9167
Caltrans	Aysha Habib	Design Oversight	909-806-2554
Caltrans	Haissam Yahya	Traffic Operations	909-383-4065
Caltrans	Antonia Toledo	Senior Environmental Planner	909-806-2541
HDR	Mark Hager	Project Manager	951-320-7343
HDR	Julian Hernandez	Roadway Engineer	951-320-7325
HDR	Angie Kung	Environmental Lead	949-241-6192
Fehr & Piers	Jason Pack	Traffic Lead for HDR	951-274-4800

### 14. ATTACHMENTS

- A. Location Map (3)
- B. Engineering Plans (21)
- C. Cost Estimate (10)
- D. Advance Planning Study (2)
- E. Right of Way Data Sheet (5)
- F. Transportation Management Plan (12)
- G. Life Cycle Cost Analysis (9)
- H. Risk Register (1)
- I. Project Category Approval (1)
- J. Signature Pages of Approved Project Study Report / Project Development Support (4)
- K. Initial Site Assessment Checklist (2)
- L. Cover and Signature Page of Approved Environmental Document (5)
- M. Noise Barrier Monitoring and Modeling Locations (7)
- N. Design Standard Decision Document Signed Cover Page (1)
- O. Storm Water Data Report Signed Cover Page (1)

# **Attachment A**

## **Location Map**



0 Feet 600

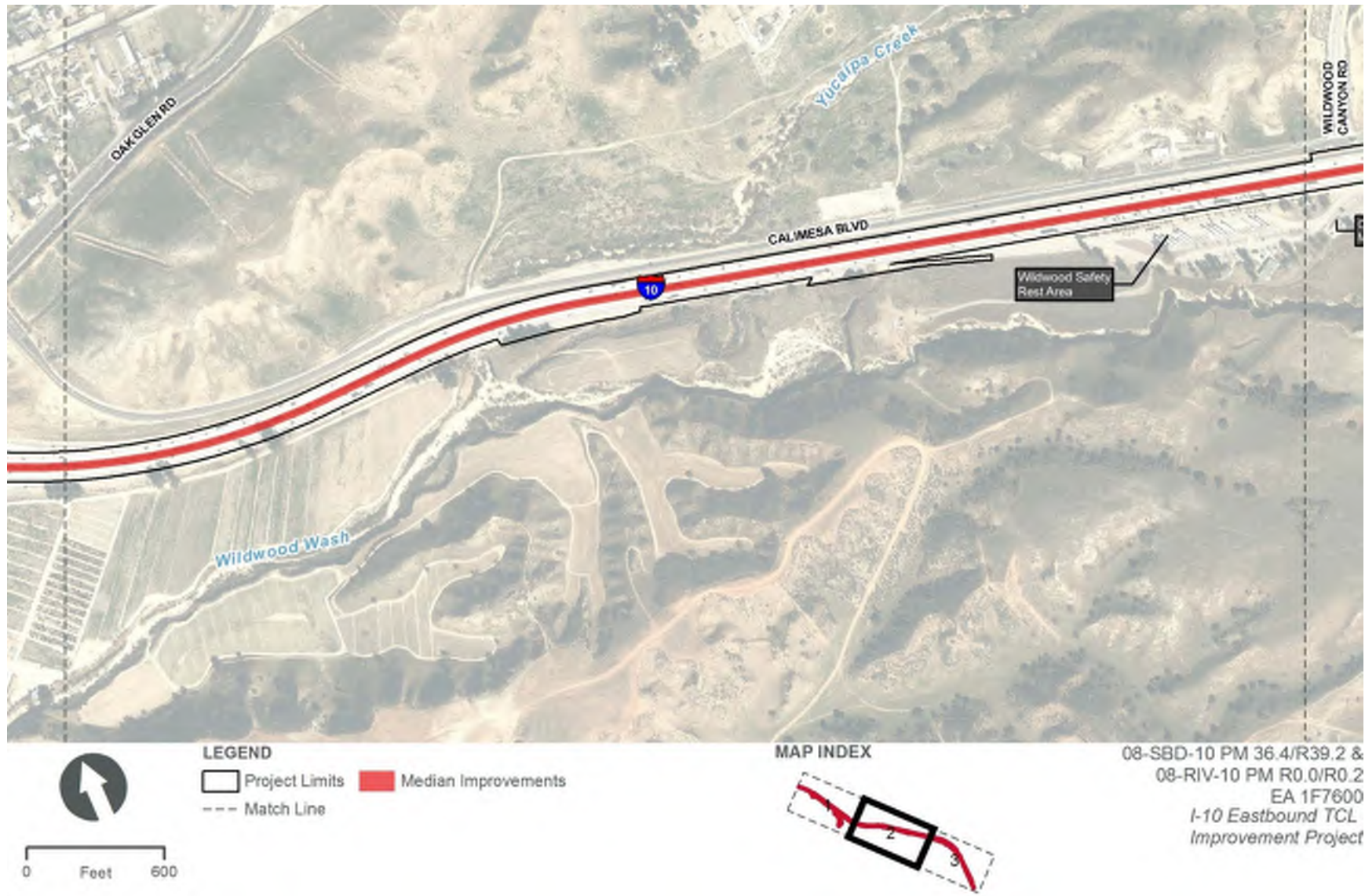
**LEGEND**

-  Project Limits
-  Median Improvements
-  Match Line
-  Wilson Creek Bridge Widening

**MAP INDEX**



08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project



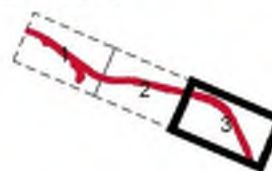


**LEGEND**

-  Project Limits
-  Median Improvements
-  Match Line

0 Feet 600

**MAP INDEX**



08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project

# **ATTACHMENT B**

## **Engineering Plans**



INDEX OF PLANS

SHEET NO. DESCRIPTION

- 1 TITLE AND LOCATION MAP
- X1-X4 TYPICAL SECTIONS
- K1 KEYMAP AND LINE INDEX
- L1-L15 LAYOUTS

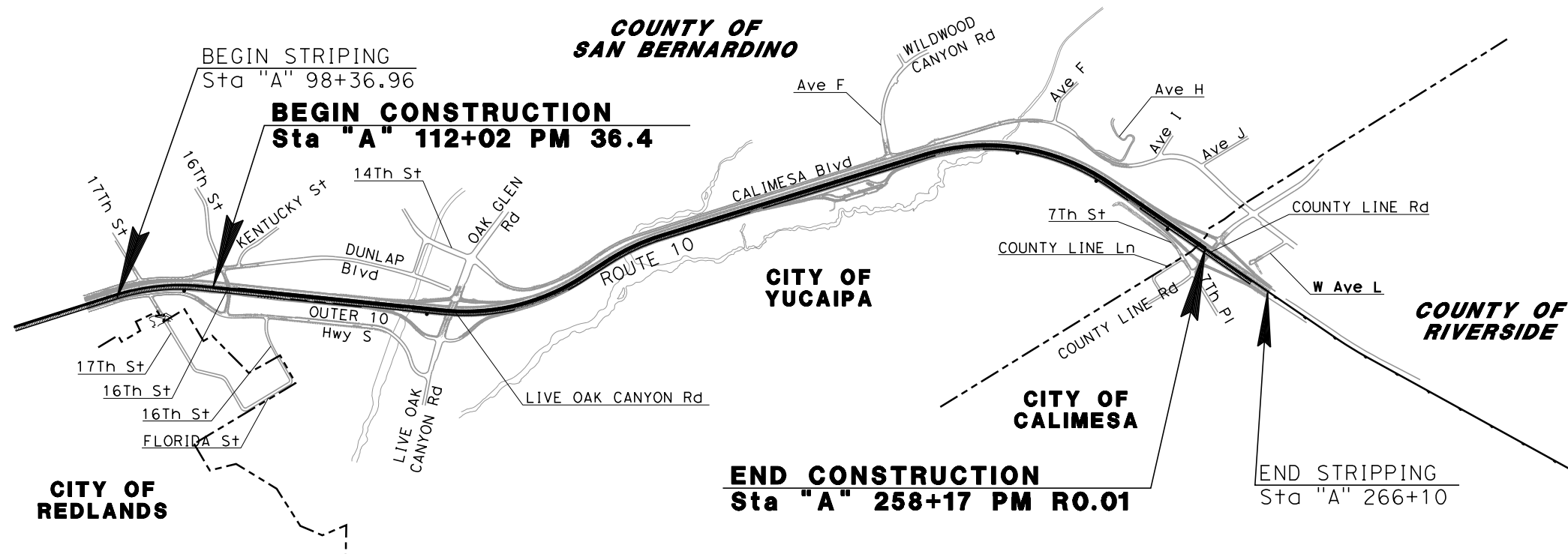
**STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION**

**PROJECT REPORT EXHIBITS FOR  
INTERSTATE 10  
EASTBOUND TRUCK CLIMBING LANE  
IN SAN BERNARDINO & RIVERSIDE COUNTIES  
FROM THE 16TH STREET OC TO 0.2 MILE  
EAST OF COUNTY LINE ROAD**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBd,Riv		36.4/R39.2, R0.0/R0.2	1	21

LOCATION MAP



PROJECT MANAGER  
**MARK S. HAGER**  
 CONSULTANT DESIGN MANAGER  
**JULIAN HERNANDEZ**

**MARK S. HAGER**  
 PROJECT MANAGER  
 REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
**MARK S. HAGER**  
 No. C 67659  
 Exp. 6-30-21  
 CIVIL

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC 2280 MARKET STREET, SUITE 100 RIVERSIDE, CA 92501	
SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410	
CONTRACT No.	<b>08-1F7600</b>
PROJECT ID	<b>0815000050</b>

NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 REVISIONS  
 JULIAN HERNANDEZ, P.E.  
 REVISOR  
 DATE

**NOTES:**

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
- SECTIONS AS PROPOSED IN PAVEMENT REHABILITATION PROJECT EA OK2934, TO BE COMPLETED PRIOR TO THIS PROJECT.

**LEGEND:**

**STRUCTURE SECTIONS**

- 1 1.00' CRCP  
0.25' HMA-A  
0.70' AS CL 2 MAINLINE
- 2 0.90' JPCP  
1.05' AB CL 2 MEDIAN SHOULDER

**EXISTING STRUCTURE SECTIONS**

- A 1.10' CRCP  
0.25' HMA-A  
0.70' AS CL 2 MAINLINE CRCP<sup>2</sup>
- B 0.50' HMA-A  
1.60' AB CL 2 MEDIAN SHOULDER<sup>2</sup>
- C 1.25' JPCP (RSC)  
6 MILS POLYETHYLENE  
0.50' LCB RS MAINLINE RAPID SET<sup>2</sup>
- D 0.75' JPCP (RSC)  
6 MILS POLYETHYLENE  
0.35' JPCP (RSC) INDIVIDUAL SLAB REPLACEMENT<sup>2</sup>
- E 0.75' PCC  
0.33' RMCTB  
1.00' AS CL 2 (TYPE A)  
1.50' AS CL 2 (TYPE B) MAINLINE PCC

**DESIGN DESIGNATION (INTERSTATE 10)**

ADT (2025) = 84,000 ESAL<sub>20</sub> = 26,741,310  
 ADT (2045) = 109,300 TI<sub>20</sub> = 13.5  
 DHV = 7,120 TI<sub>40</sub> = 15.0  
 V = 70 MPH T = 23%  
 CLIMATE REGION: INLAND VALLEY

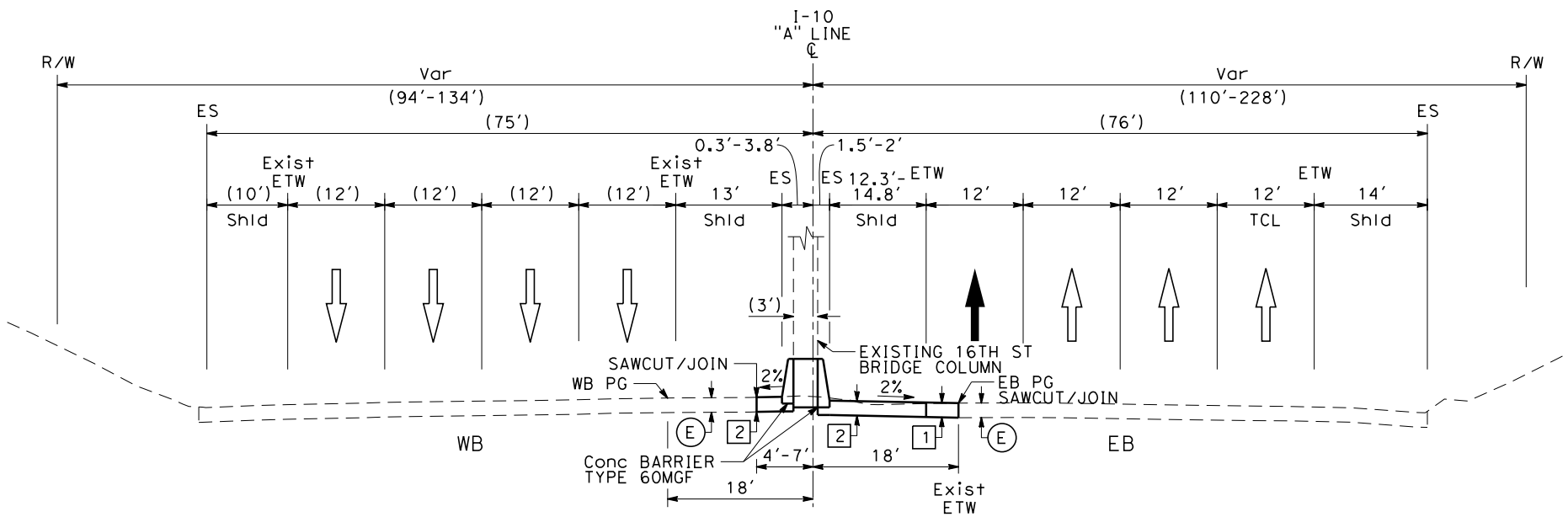
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Sbd, Riv	10	36.4/R39.2, RO.0/RO.2	2	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE

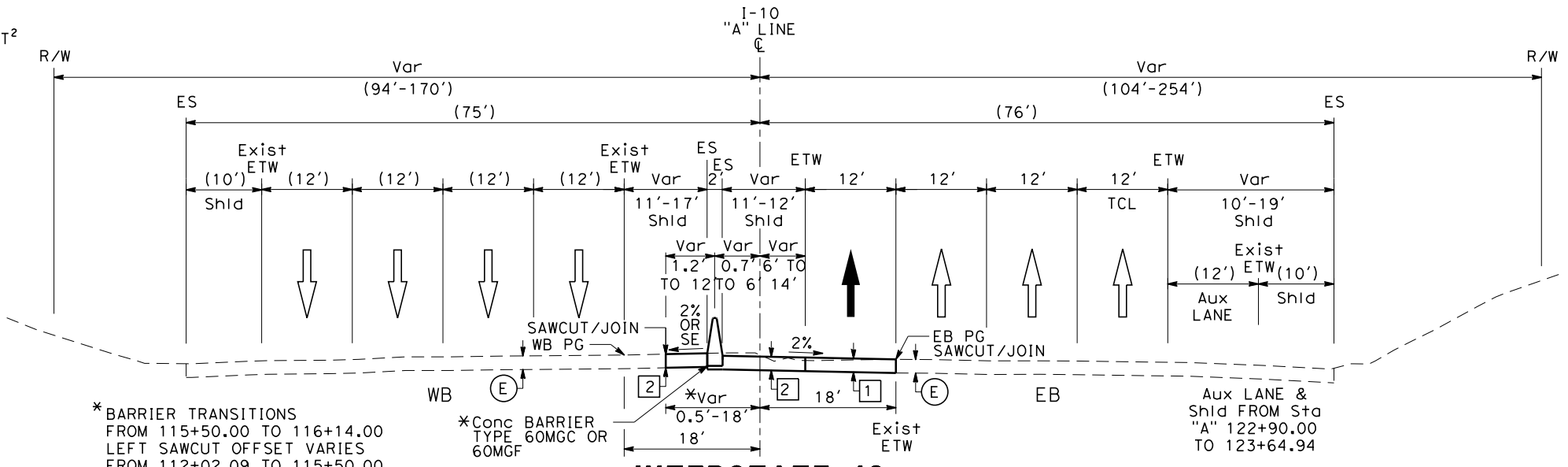
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**INTERSTATE 10**  
 Sta "A" 113+26.00 TO 115+50.00  
 AT 16TH ST BRIDGE



**INTERSTATE 10**  
 Sta "A" 112+00.00 TO 113+26.00  
 Sta "A" 115+50.00 TO 123+64.94

\* BARRIER TRANSITIONS FROM 115+50.00 TO 116+14.00 LEFT SAWCUT OFFSET VARIES FROM 112+02.09 TO 115+50.00

\* Conc BARRIER TYPE 60MGC OR 60MGF

Aux LANE & Shld FROM Sta "A" 122+90.00 TO 123+64.94

**TYPICAL CROSS SECTIONS**  
 NO SCALE

**NOT FOR CONSTRUCTION**

X-1

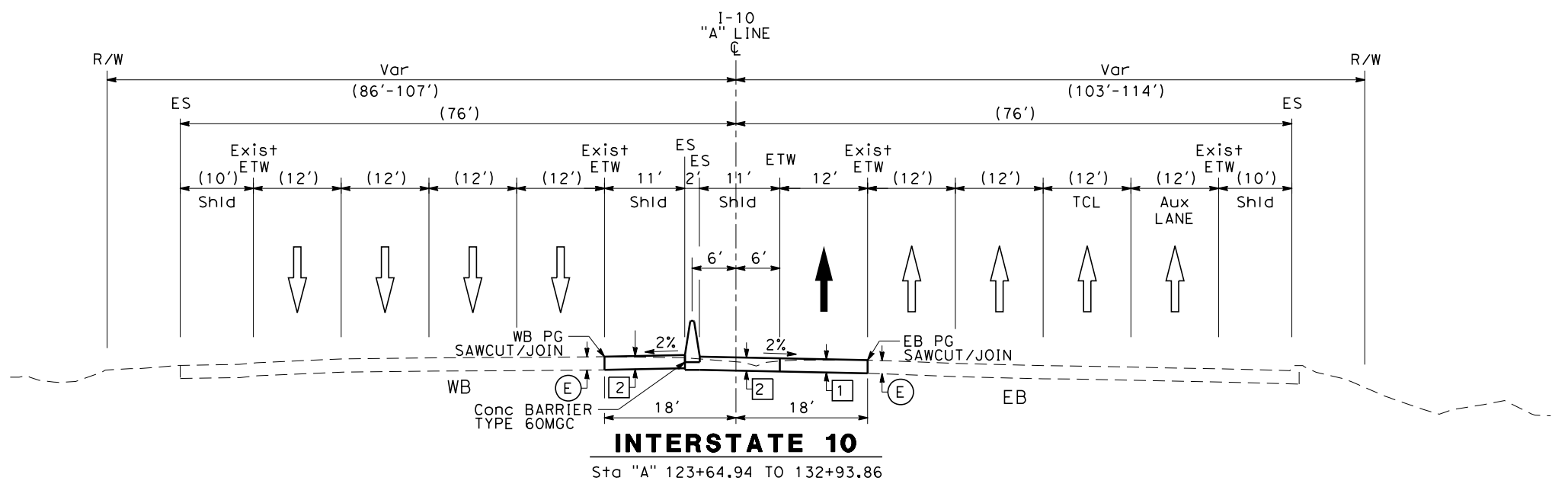
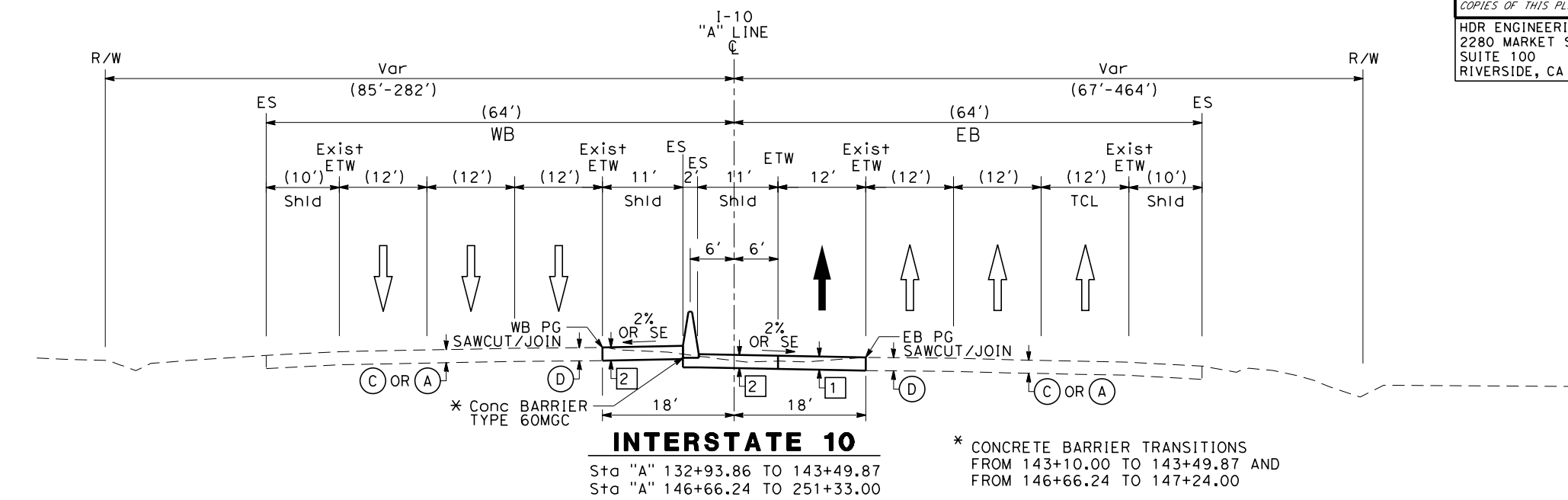
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 JULIAN HERNANDEZ, P.E.  
 REVISIONS: REVISED BY, DATE, CHECKED BY, DESIGNED BY

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	3	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_  
 PLANS APPROVAL DATE \_\_\_\_\_  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.  
 HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**TYPICAL CROSS SECTIONS**  
 NO SCALE

**NOT FOR CONSTRUCTION**

**X-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT - FUNCTIONAL SUPERVISOR  
 JULIAN HERNANDEZ, P.E.  
 REVISOR BY  
 DATE REVISION  
 CALCULATED/DESIGNED BY  
 CHECKED BY

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	4	21

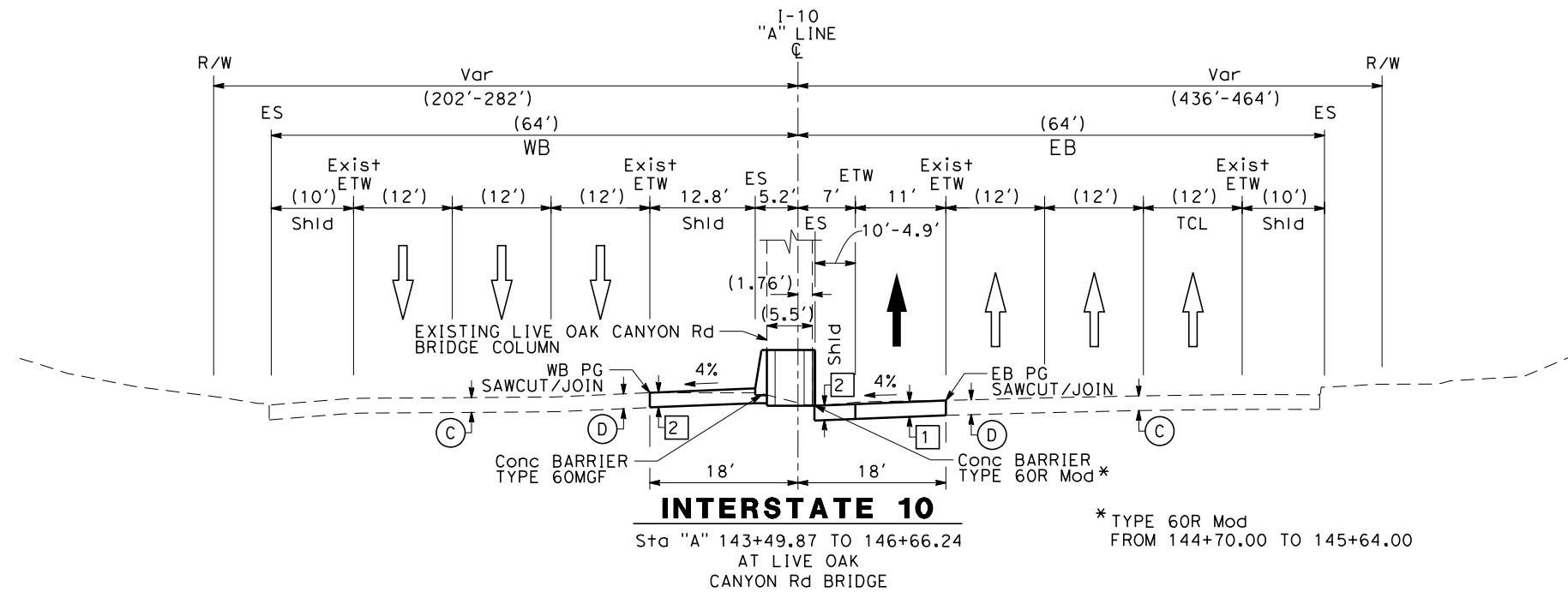
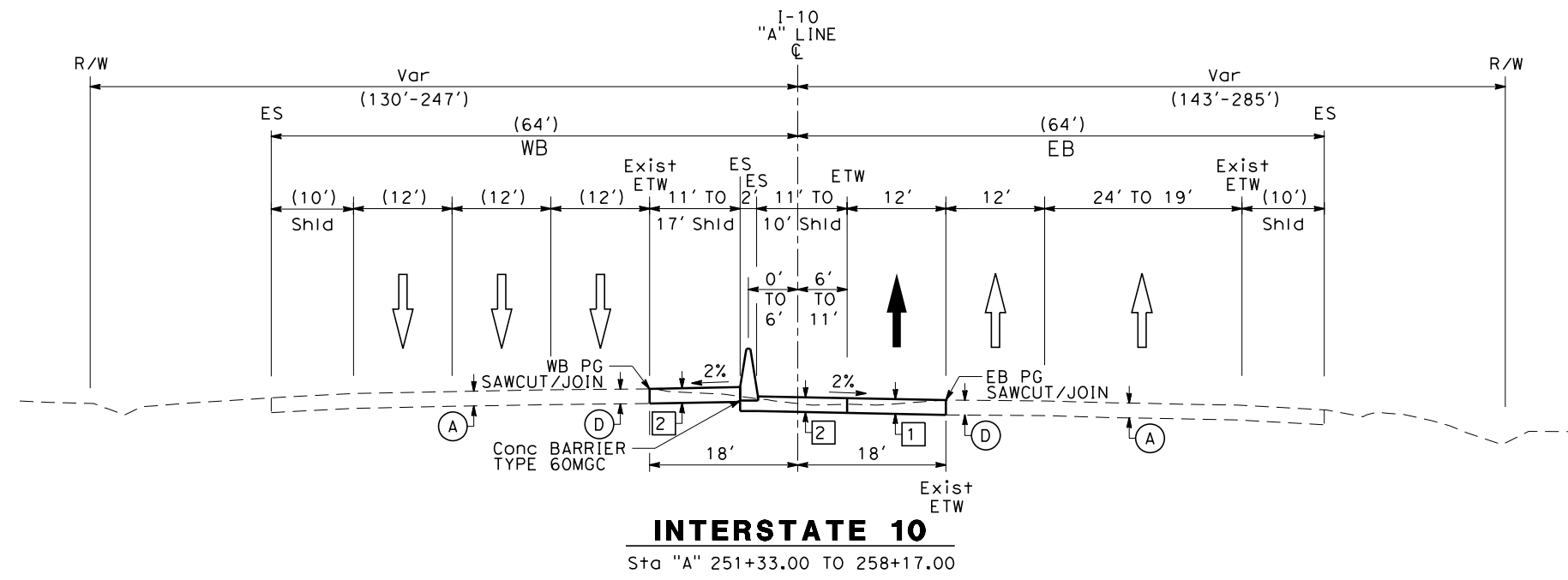
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410

REGISTERED PROFESSIONAL ENGINEER  
 Mark S. Hager  
 No. C 67659  
 Exp. 6-30-21  
 CIVIL  
 STATE OF CALIFORNIA



**TYPICAL CROSS SECTIONS**  
 NO SCALE

**NOT FOR CONSTRUCTION**

**X-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT - FUNCTIONAL SUPERVISOR  
 JULIAN HERNANDEZ, P.E.  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 DATE REVISED

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

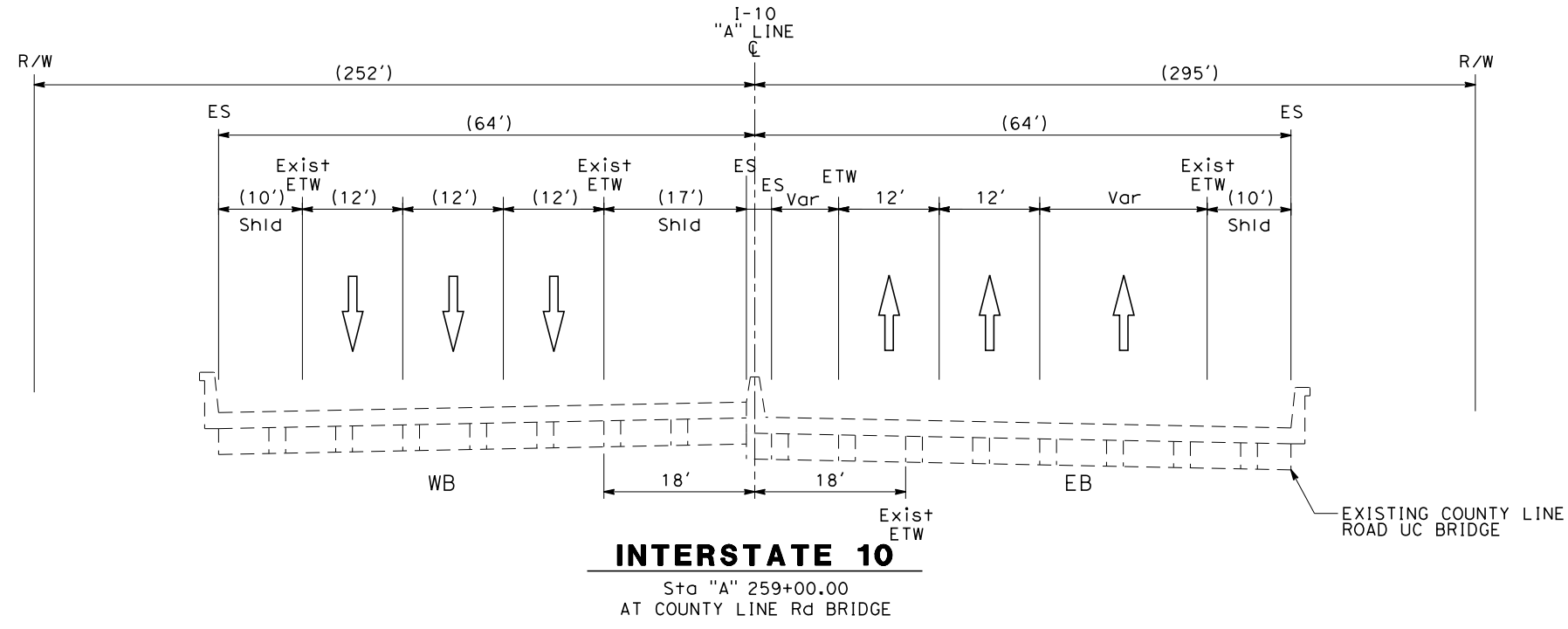
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	5	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**TYPICAL CROSS SECTIONS**  
 NO SCALE

**NOT FOR CONSTRUCTION**

**X-4**

LAST REVISION DATE PLOTTED => \$DATE  
 00-00-00 TIME PLOTTED => \$TIME

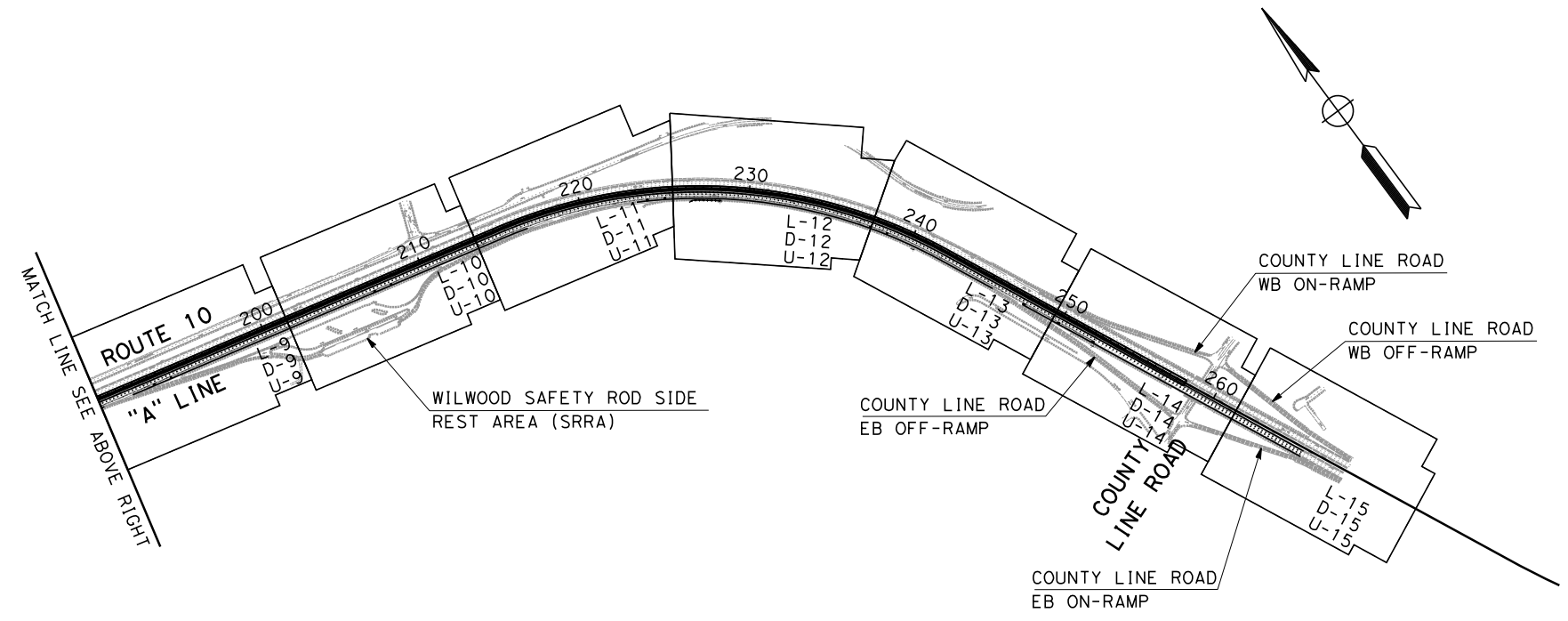
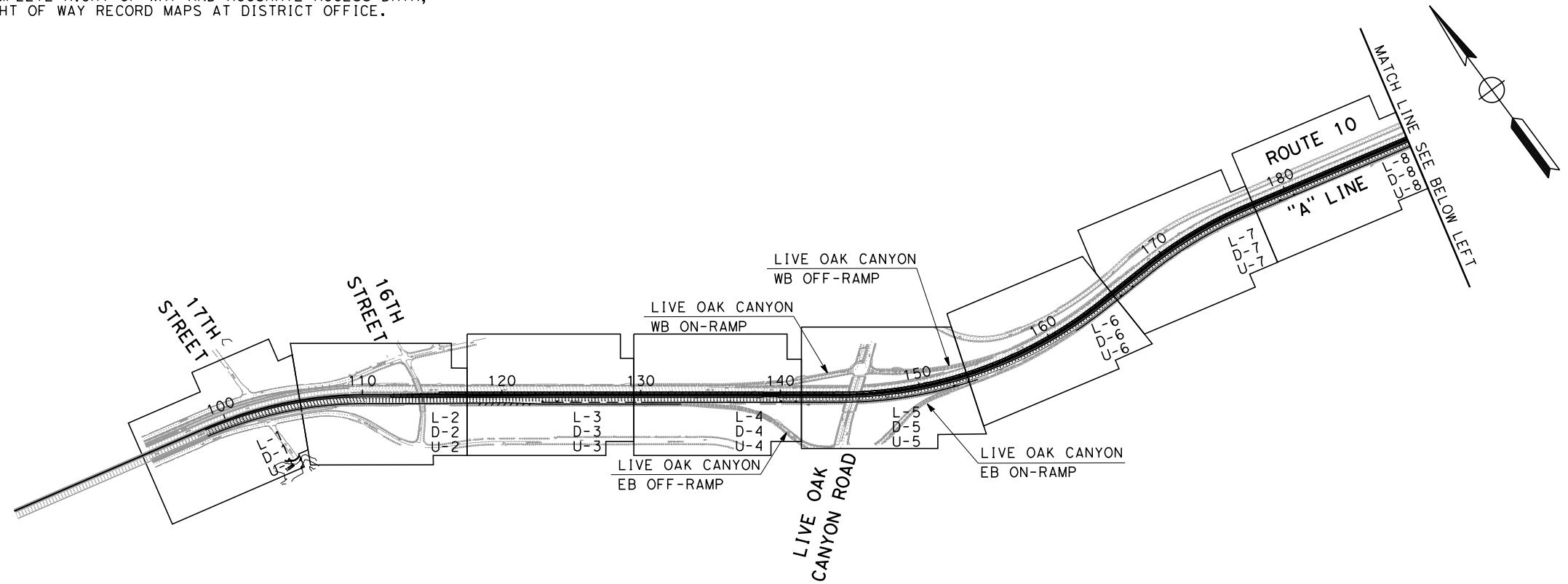
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISOR  
 JULIAN HERNANDEZ, P.E.  
 x  
 x  
 x  
 x  
 x

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	6	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_  
 PLANS APPROVAL DATE \_\_\_\_\_  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.  
 HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**KEY MAP AND LINE INDEX**  
 NO SCALE **K-1**

LAST REVISION DATE PLOTTED => \$DATE 00-00-00 TIME PLOTTED => \$TIME

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**ABBREVIATIONS:**

TCL TRUCK CLIMBING LANE

CURVE DATA				
No. @	R	Δ	T	L
1	2913.09'	23°26'00"	604.16'	1191.42'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD,Riv	10	36.4/R39.2, RO.0/RO.2	7	21

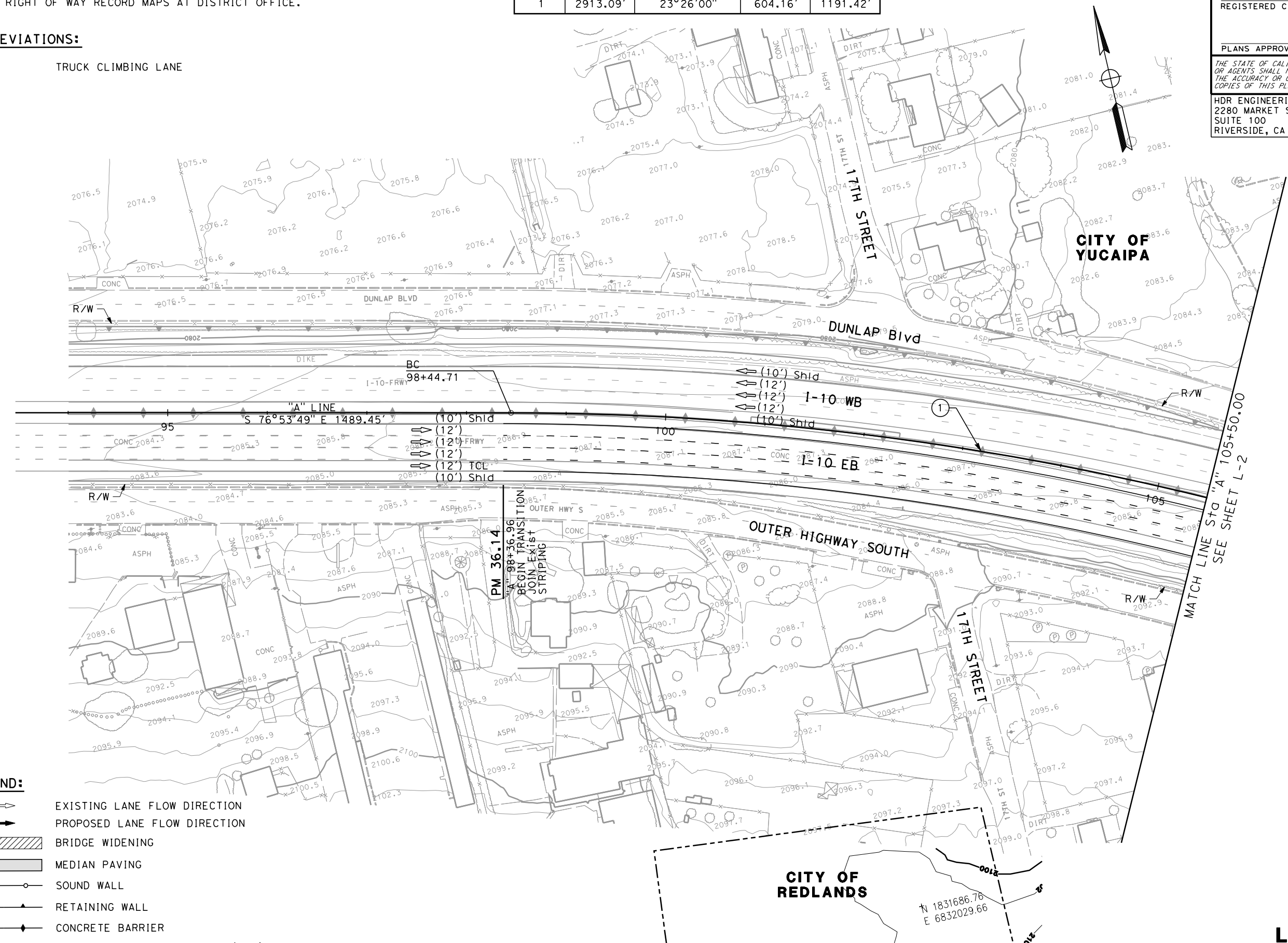
MARK S. HAGER  
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**LEGEND:**

- EXISTING LANE FLOW DIRECTION
- PROPOSED LANE FLOW DIRECTION
- BRIDGE WIDENING
- MEDIAN PAVING
- SOUND WALL
- RETAINING WALL
- CONCRETE BARRIER
- MIDWEST GUARD RAIL SYSTEM (MGS) WITH VEGETATION CONTROL TREATMENT

**NOT FOR CONSTRUCTION**

**LAYOUT**  
SCALE: 1"=50'

**L-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED

JULIAN HERNANDEZ, P.E.

REVISOR BY

DATE REVISED

REVISOR BY

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

No. @	R	Δ	T	L
1	2913.09	23°26'00"	604.16'	1191.42'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	Sbd,Riv	10	36.4/R39.2, RO.0/RO.2	8	21

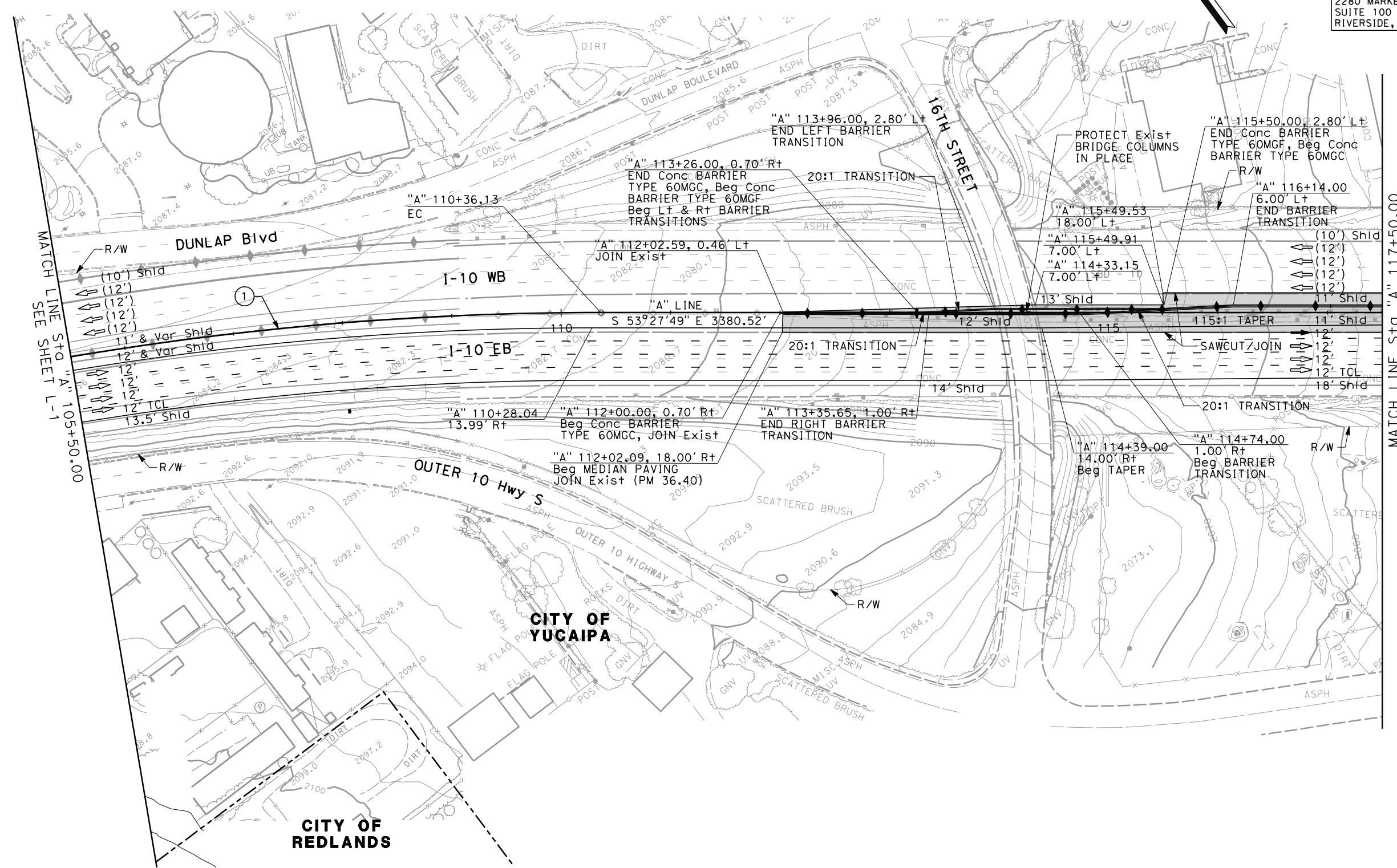
MARK S. HAGER  
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
2280 MARKET STREET  
SUITE 100  
RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
TRANSPORTATION AUTHORITY  
1170 W. 3rd STREET  
SAN BERNARDINO, CA 92410



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Julian Hernandez, P.E.

REVISOR: JULIAN HERNANDEZ, P.E.

DATE REVISOR: \_\_\_\_\_

CALCULATED/DESIGNED BY: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

CONSULTANT FUNCTIONAL SUPERVISOR: \_\_\_\_\_

DATE: \_\_\_\_\_

00-00-00 LAST REVISION DATE PLOTTED => \$DATE

00-00-00 TIME PLOTTED => \$TIME

**NOT FOR CONSTRUCTION**

**LAYOUT**  
SCALE: 1"=50'  
**L-2**



**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,  
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	9	21

MARK S. HAGER  
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

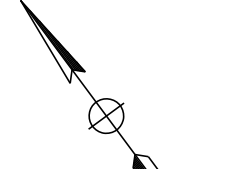
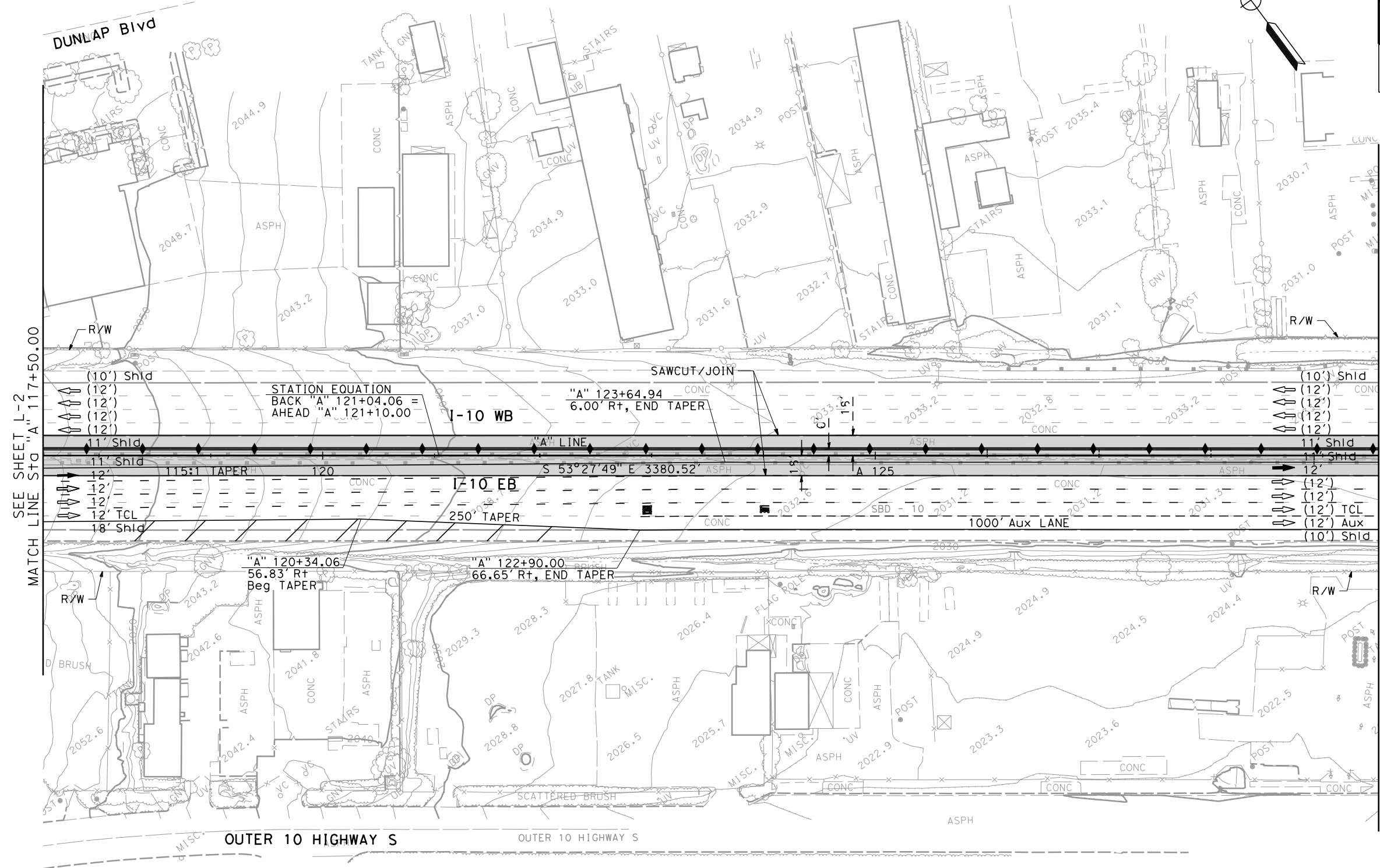
PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
2280 MARKET STREET  
SUITE 100  
RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
TRANSPORTATION AUTHORITY  
1170 W. 3rd STREET  
SAN BERNARDINO, CA 92410

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b>	JULIAN HERNANDEZ, P.E.	CHECKED BY	DATE REVISED



**NOT FOR CONSTRUCTION**

**LAYOUT**  
SCALE: 1"=50'  
**L-3**

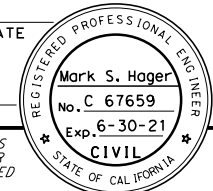
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED

**NOTES:**

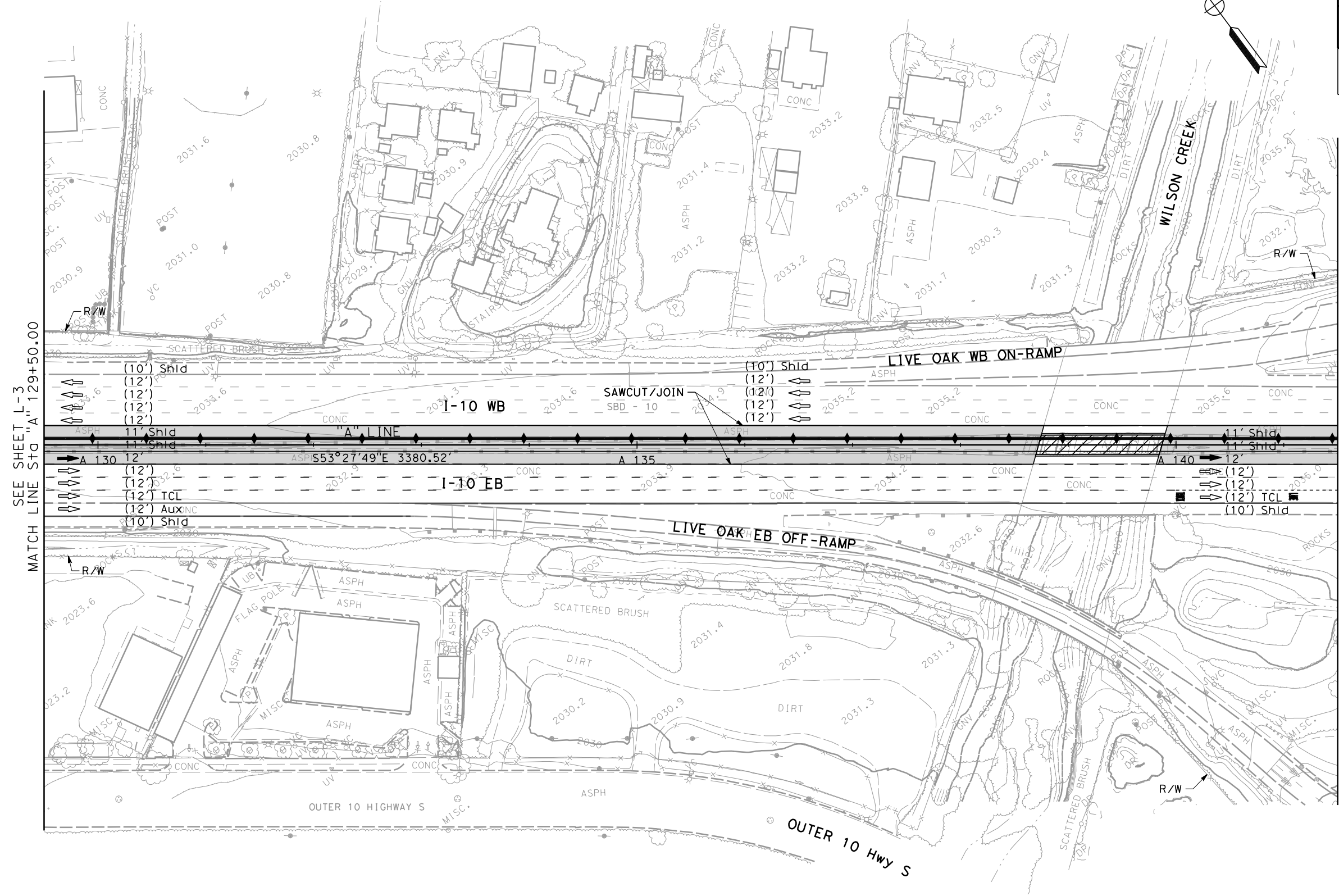
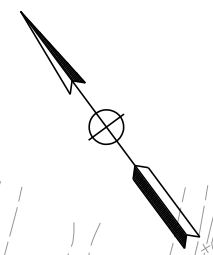
1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,  
 SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	10	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_  
 PLANS APPROVAL DATE \_\_\_\_\_  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-4**

LAST REVISION DATE PLOTTED => #DATE 00-00-00 TIME PLOTTED => \$TIME

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

No. Ⓞ	R	Δ	T	L
2	2999.73'	38°39'45"	1052.33'	2024.18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD,Riv	10	36.4/R39.2, RO.0/RO.2	11	21

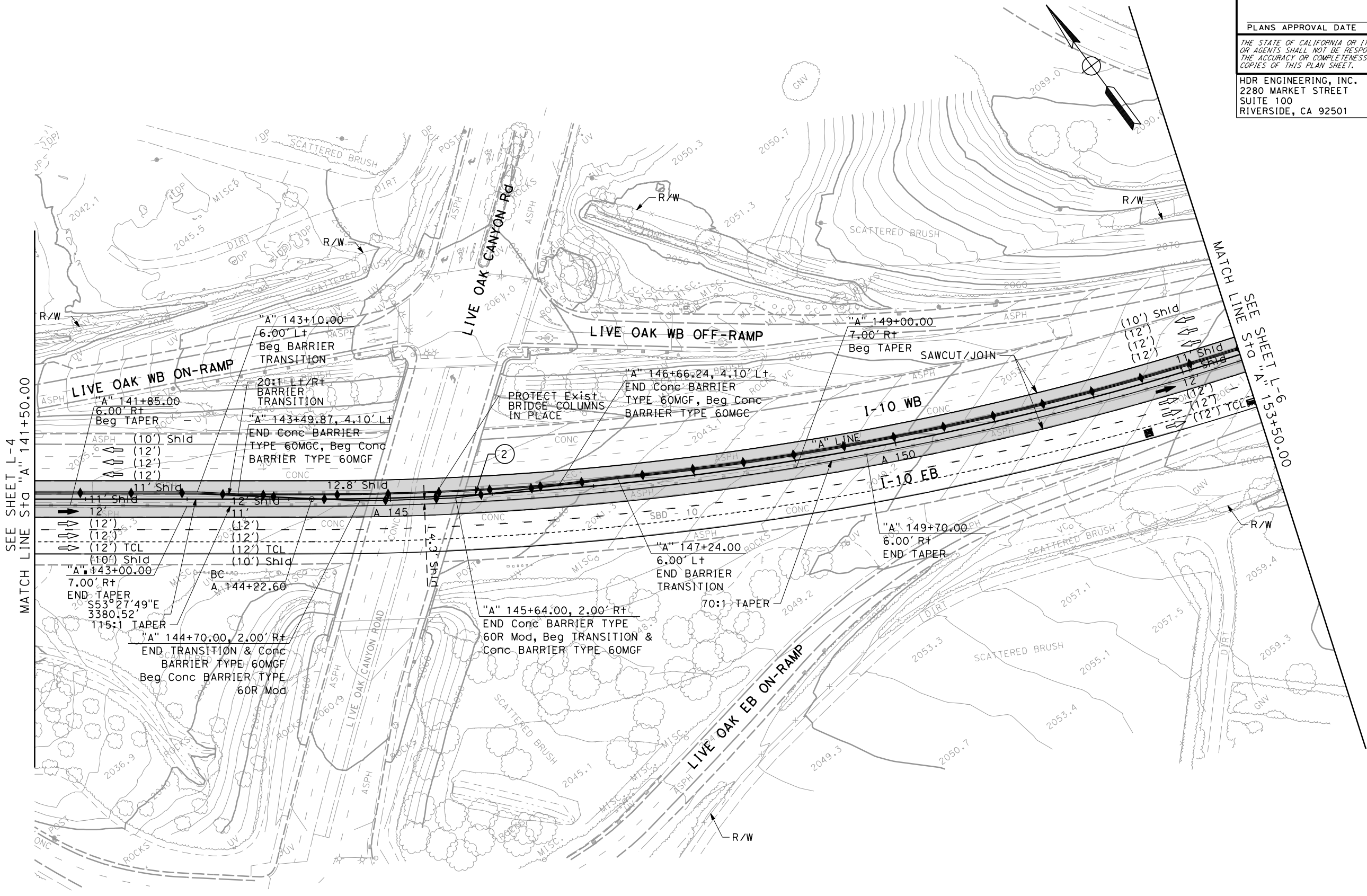
MARK S. HAGER  
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
2280 MARKET STREET  
SUITE 100  
RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
TRANSPORTATION AUTHORITY  
1170 W. 3rd STREET  
SAN BERNARDINO, CA 92410



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

**Caltrans**

REVISOR: JULIAN HERNANDEZ, P.E.

DESIGNER: JULIAN HERNANDEZ, P.E.

CHECKED BY: \_\_\_\_\_

FUNCTIONAL SUPERVISOR: \_\_\_\_\_

CONSULTANT: \_\_\_\_\_

REVISIONS: \_\_\_\_\_

**NOT FOR CONSTRUCTION**

**LAYOUT**  
SCALE: 1"=50'  
**L-5**

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

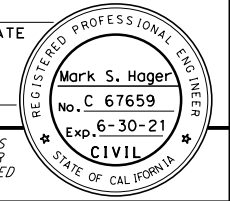
No. Ⓞ	R	Δ	T	L
2	2999.73'	38°39'45"	1052.33'	2024.18'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, RO.0/RO.2	12	21

MARK S. HAGER  
REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



HDR ENGINEERING, INC.  
2280 MARKET STREET  
SUITE 100  
RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
TRANSPORTATION AUTHORITY  
1170 W. 3rd STREET  
SAN BERNARDINO, CA 92410

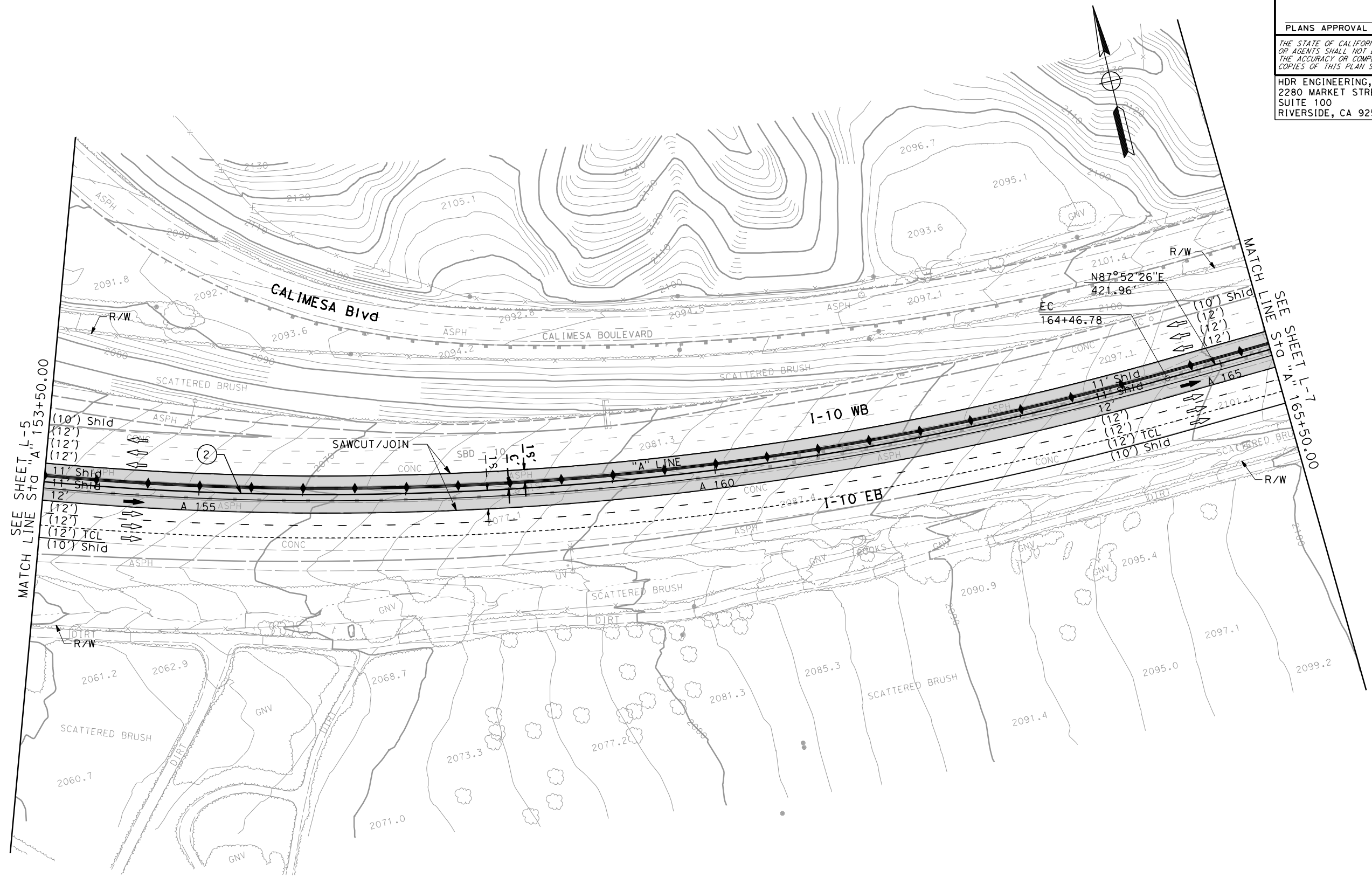
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Julian Hernandez, P.E.

REVISOR

DATE

REVISIONS



**NOT FOR CONSTRUCTION**

**LAYOUT**  
SCALE: 1"=50'

**L-6**

STATE OF CALIFORNIA -- DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISOR

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

No. Ⓞ	R	Δ	T	L
3	2999.73'	15°44'0"	414.47'	823.72'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD,Riv	10	36.4/R39.2, RO.0/RO.2	13	21

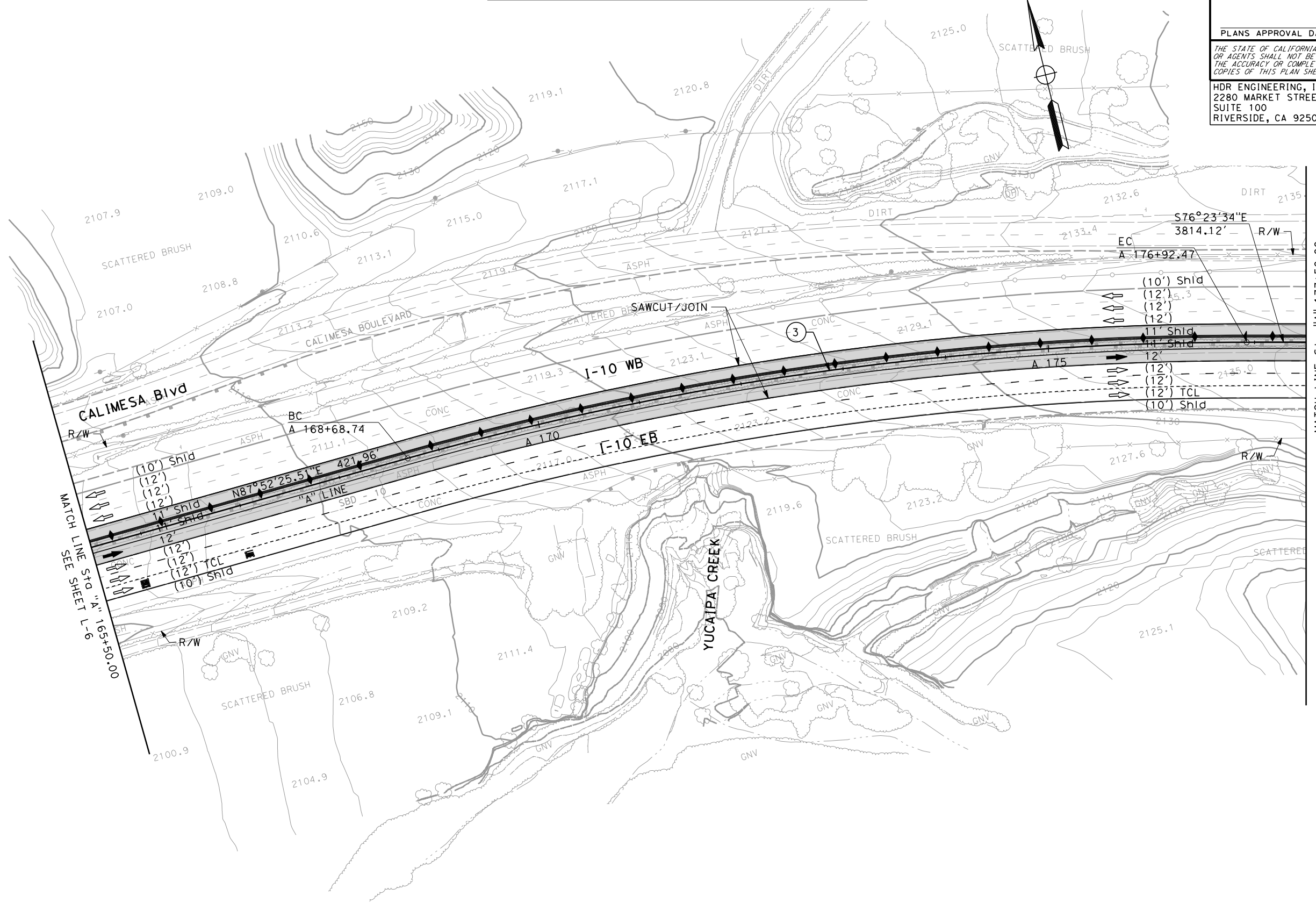
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'  
**L-7**

LAST REVISION: DATE PLOTTED => #DATE 00-00-00 TIME PLOTTED => \$TIME

STATE OF CALIFORNIA -- DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, RO.0/RO.2	14	21

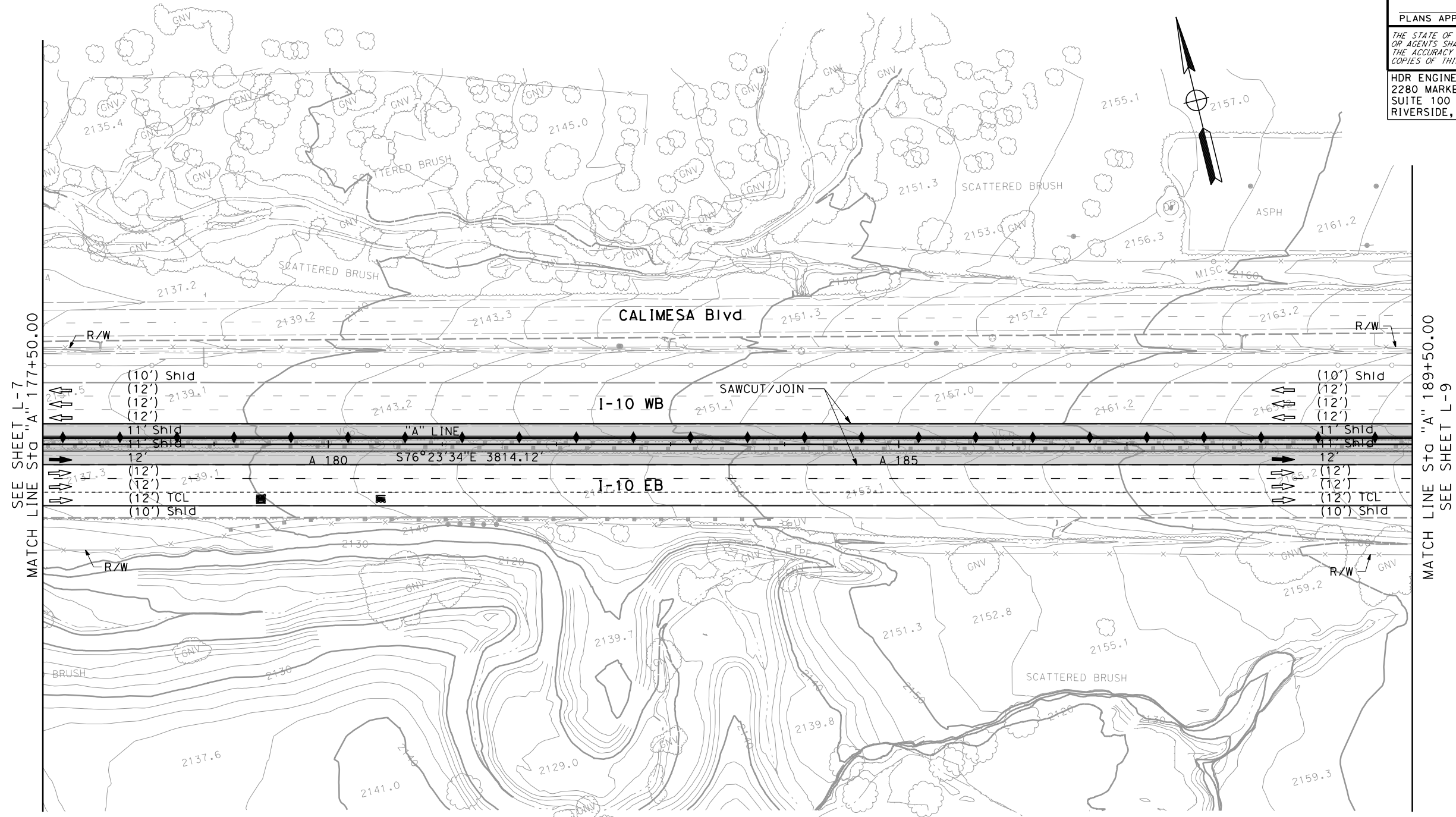
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-8**

LAST REVISION DATE PLOTTED => #DATE 00-00-00 TIME PLOTTED => \$TIME

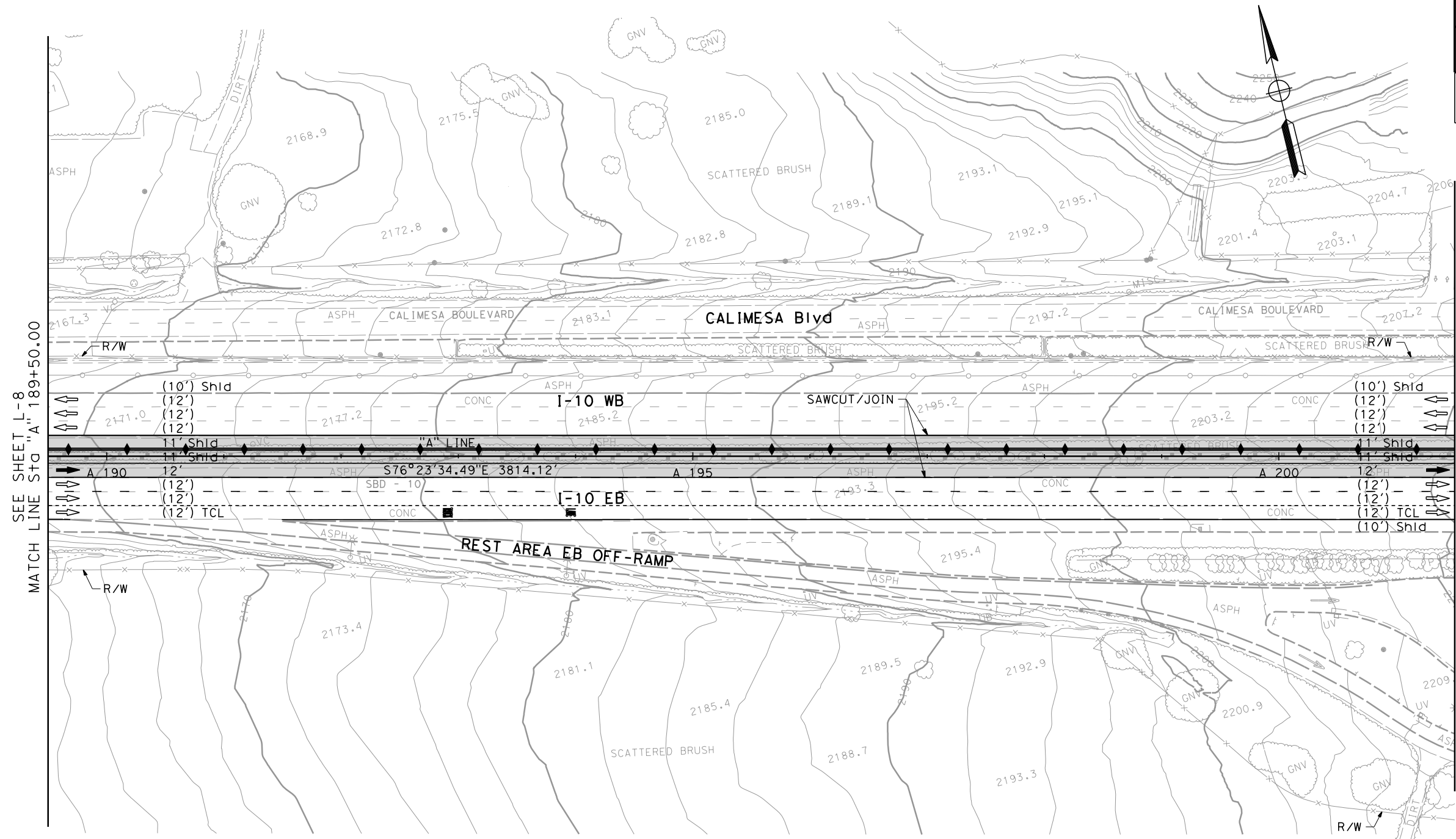
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	15	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_  
 PLANS APPROVAL DATE \_\_\_\_\_  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.  
 HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-9**

LAST REVISION DATE PLOTTED => #DATE 00-00-00 TIME PLOTTED => \$TIME

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD,Riv	10	36.4/R39.2, RO.0/RO.2	16	21

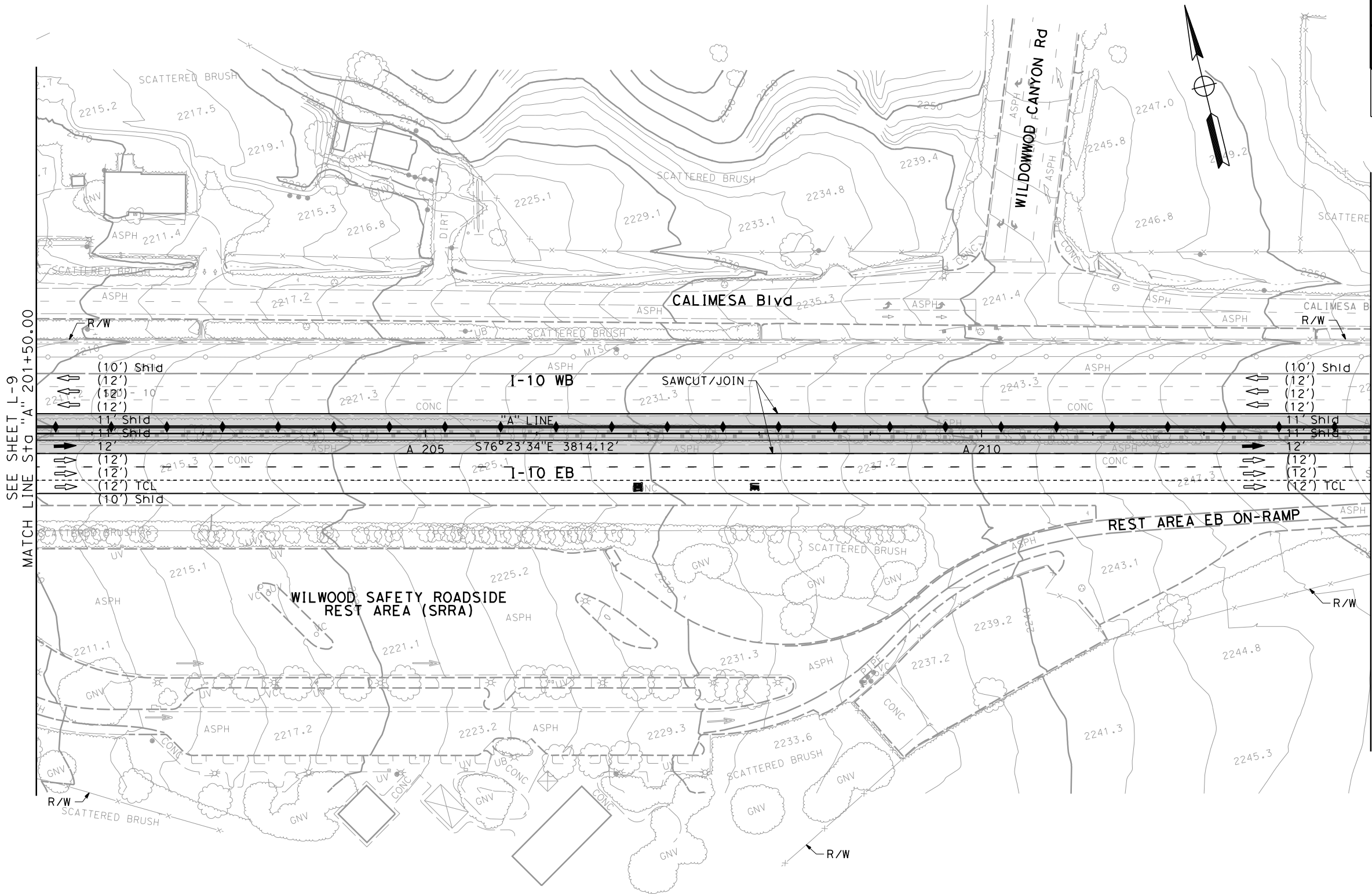
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



SEE SHEET L-9  
 MATCH LINE STG "A" 201+50.00

MATCH LINE STG "A" 213+50.00  
 SEE SHEET L-11

**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-10**

LAST REVISION DATE PLOTTED => #DATE 00-00-00 TIME PLOTTED => \$TIME



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR  
 DATE REVISION  
 JULIAN HERNANDEZ, P.E.  
 JULIAN HERNANDEZ, P.E.  
 JULIAN HERNANDEZ, P.E.

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

No. @	R	Δ	T	L
4	2999.73'	51°33'00"	1448.51'	2698.91'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	17	21

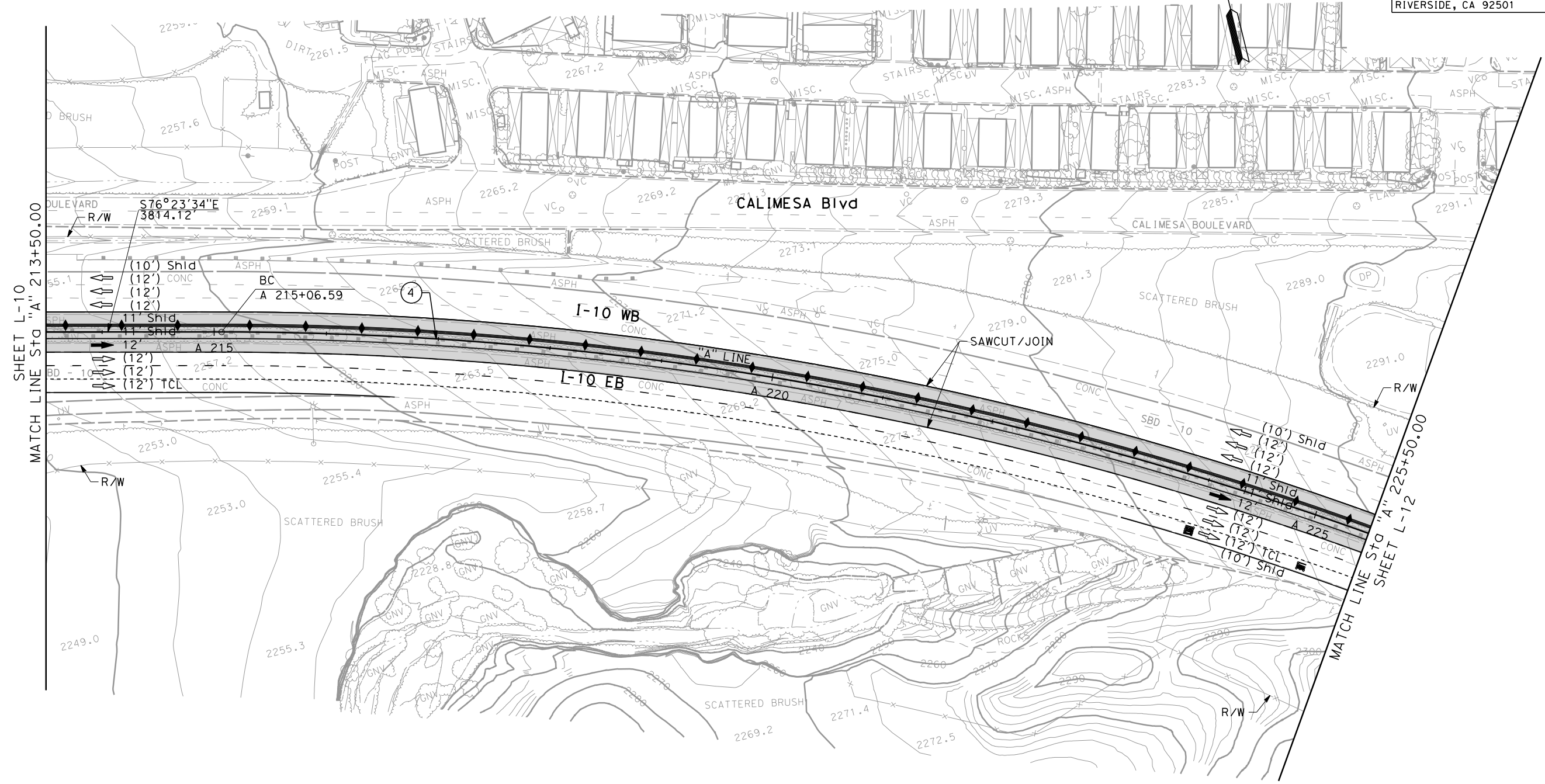
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-11**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 REVISOR BY  
 JULIAN HERNANDEZ, P.E.  
 CHECKED BY  
 DATE REVISION

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

No. @	R	Δ	T	L
4	2999.73'	51°33'0"	1448.51'	2698.91'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, RO.0/RO.2	18	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-12**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 REVISOR BY  
 DATE REVISION

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

**CURVE DATA**

No. Ⓞ	R	Δ	T	L
4	2999.73'	51°33'00"	1448.51'	2698.91'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, RO.0/RO.2	19	21

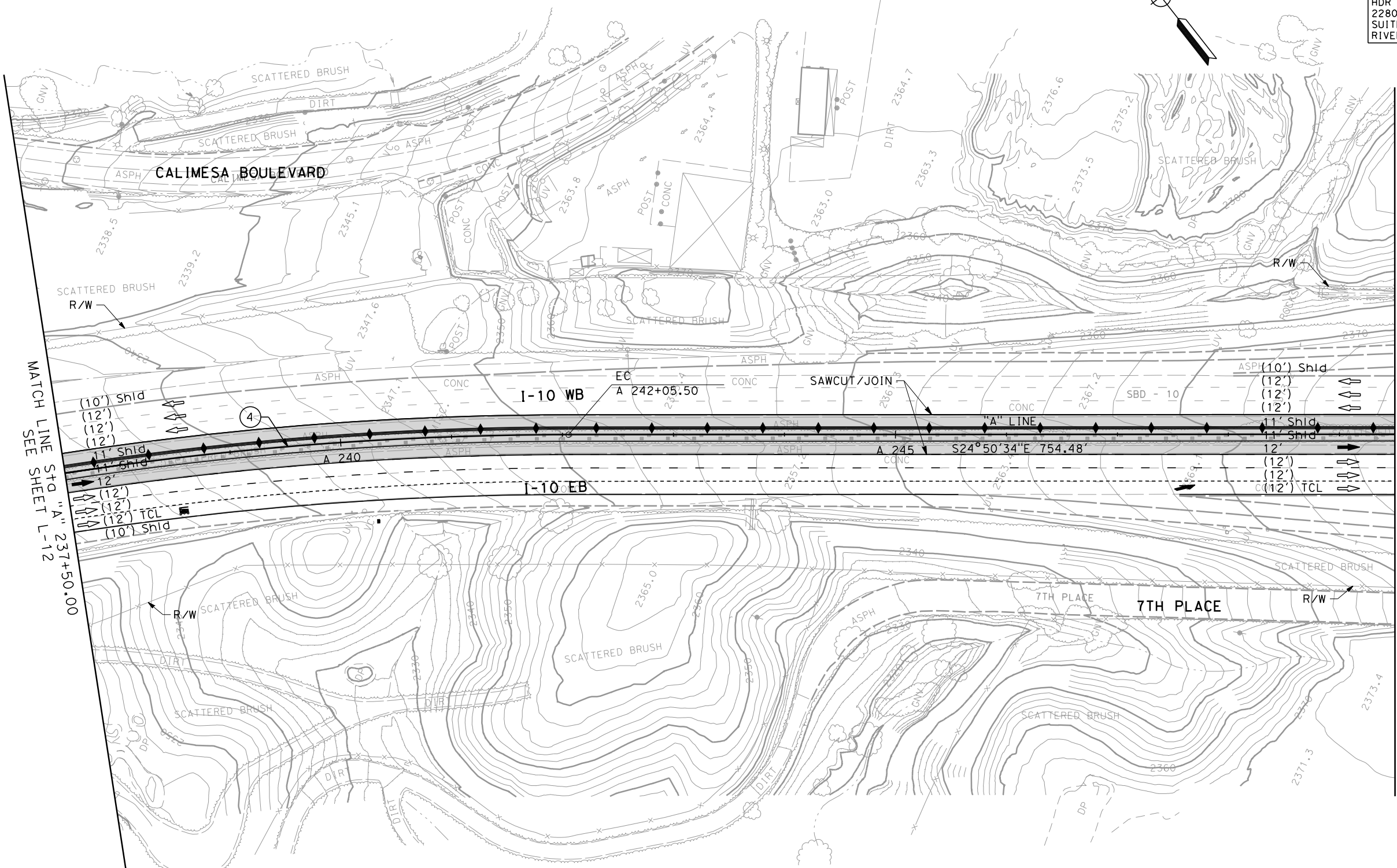
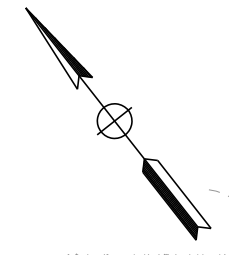
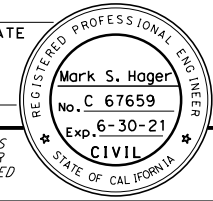
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



MATCH LINE STD "A" 237+50.00  
SEE SHEET L-12

MATCH LINE STD "A" 249+50.00  
SEE SHEET L-14

**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-13**

LAST REVISION    DATE PLOTTED => \$DATE    00-00-00    TIME PLOTTED => \$TIME

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISIONS: JULIAN HERNANDEZ, P.E.  
 REVISIONS: JULIAN HERNANDEZ, P.E.  
 REVISIONS: JULIAN HERNANDEZ, P.E.

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

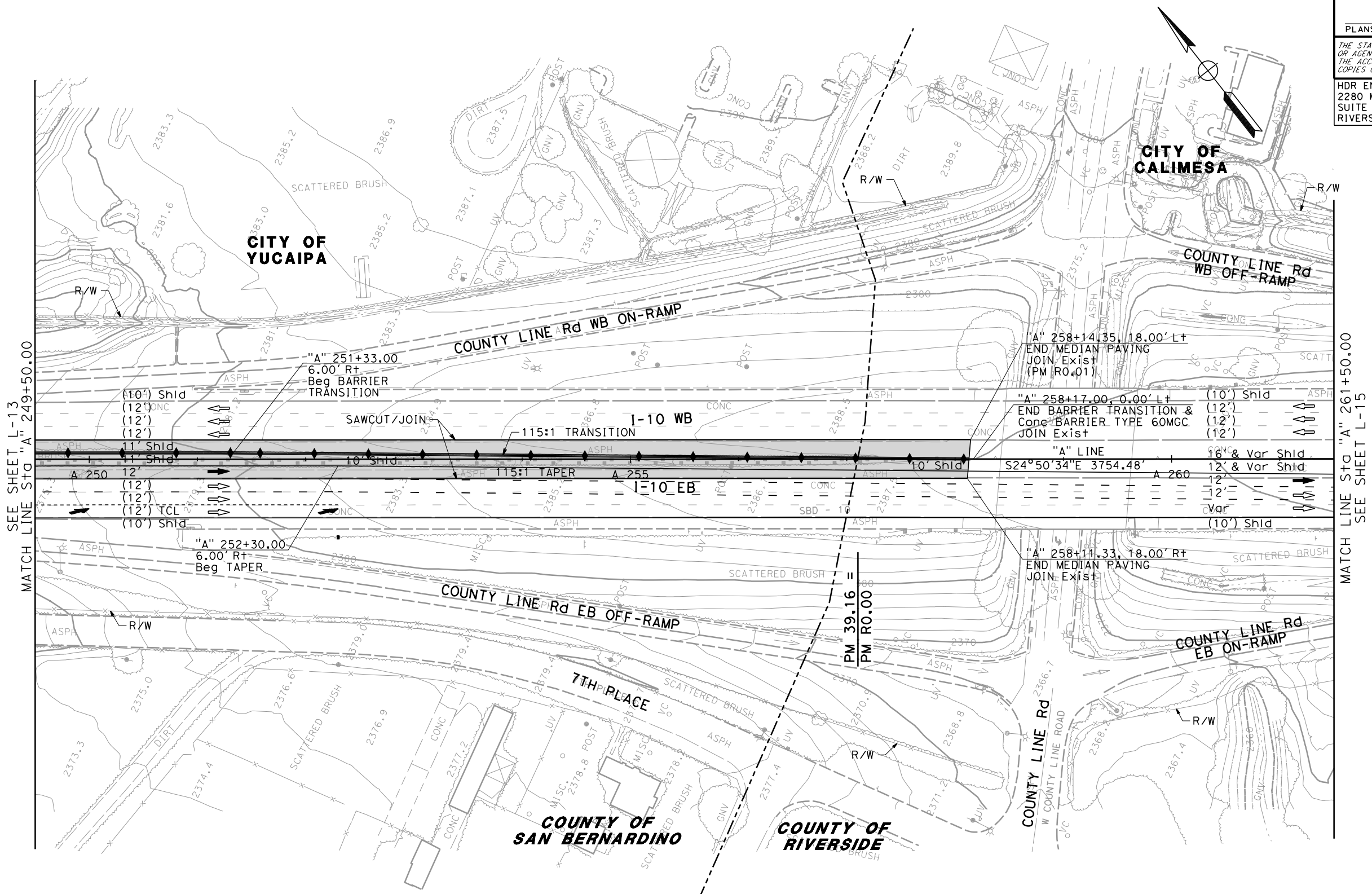
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD,Riv	10	36.4/R39.2, RO.0/RO.2	20	21

MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC. 2280 MARKET STREET SUITE 100 RIVERSIDE, CA 92501  
 SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY 1170 W. 3rd STREET SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'  
**L-14**

STATE OF CALIFORNIA -- DEPARTMENT OF TRANSPORTATION  
**Stantec**  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 REVISOR BY  
 DATE REVISED

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA,  
 SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
8	SBD, Riv	10	36.4/R39.2, R0.0/R0.2	21	21

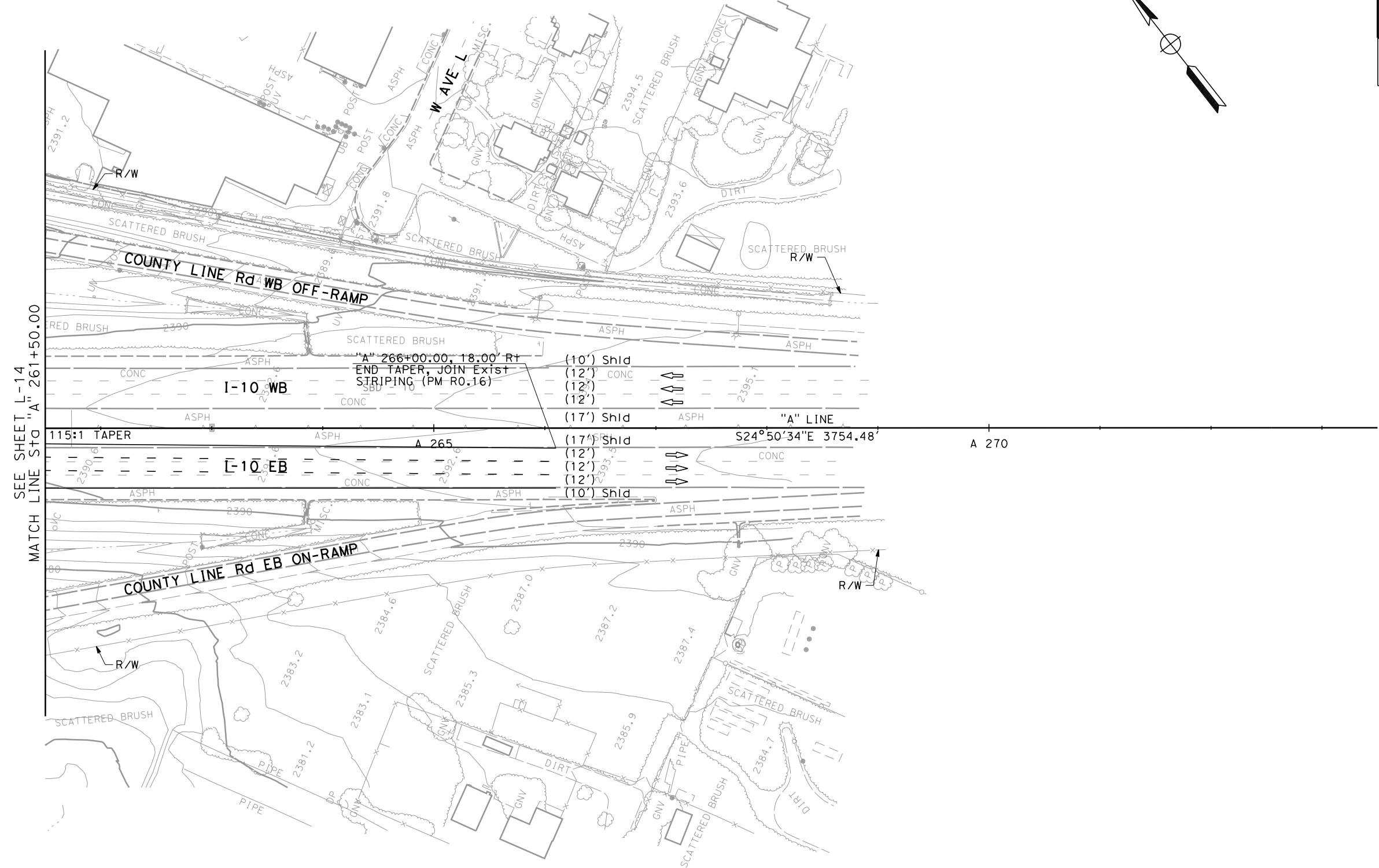
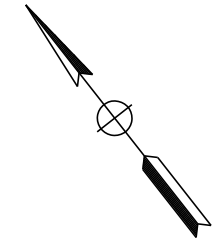
MARK S. HAGER  
 REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

PLANS APPROVAL DATE \_\_\_\_\_

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

HDR ENGINEERING, INC.  
 2280 MARKET STREET  
 SUITE 100  
 RIVERSIDE, CA 92501

SAN BERNARDINO COUNTY  
 TRANSPORTATION AUTHORITY  
 1170 W. 3rd STREET  
 SAN BERNARDINO, CA 92410



**NOT FOR CONSTRUCTION**

**LAYOUT**  
 SCALE: 1"=50'

**L-15**

LAST REVISION DATE PLOTTED => \$DATE 00-00-00 TIME PLOTTED => \$TIME

# **ATTACHMENT C**

## **Cost Estimate**

**PROJECT  
PLANNING COST ESTIMATE**

EA: 08-1F7600

EA: 08-1F7600 PID: 0815000050

PID: 0815000050

District-County-Route: 08-SBd/Riv-10

PM: 36.4-R39.2/R0.0-R0.2

Type of Estimate : Project Approval/Environmental Document (PA/ED)

Program Code : 800.100/HE13

Project Limits : I-10 Eastbound SBd PM 36.4-R39.2, Riv PM R0.0-R0.2

Project Description: I-10 EB Truck Climbing Lane

Scope : Median Paving Improvements, Signing & Striping

Alternative : Build (Preferred)

**SUMMARY OF PROJECT COST ESTIMATE**

	<u>Current Year Cost</u>	<u>Escalated Cost</u>
TOTAL ROADWAY COST	\$ 18,593,400	\$ 22,621,714
TOTAL STRUCTURES COST	\$ 1,738,800	\$ 2,115,516
SUBTOTAL CONSTRUCTION COST	\$ 20,332,200	\$ 24,737,230
TOTAL RIGHT OF WAY COST	\$ -	\$ -
<b>TOTAL CAPITAL OUTLAY COSTS</b>	<b>\$ 20,333,000</b>	<b>\$ 24,738,000</b>
PA/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ 2,500,000	\$ 2,747,762
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ 4,200,000	\$ 4,859,239
<b>TOTAL SUPPORT COST</b>	<b>\$ 6,700,000</b>	<b>\$ 7,607,001</b>

<b>TOTAL PROJECT COST</b>	<b>\$ 27,050,000</b>	<b>\$ 32,350,000</b>
---------------------------	----------------------	----------------------

*If Project has been programmed enter Programmed Amount*

Date of Estimate (Month/Year) \_\_\_\_\_ Month / Year  
5 / 2019

Estimated Construction Start (Month/Year) \_\_\_\_\_ 6 / 2022

Number of Working Days = 330

Estimated Mid-Point of Construction (Month/Year) \_\_\_\_\_ 2 / 2023

Estimated Construction End (Month/Year) \_\_\_\_\_ 12 / 2023

Number of Plant Establishment Days 30

**Estimated Project Schedule**

PID Approval	June-17
PA/ED Approval	November-20
PS&E	December-21
RTL	December-21
Begin Construction	June-22

Cost Estimate Certifier	Julian Hernandez, HDR Engineering Inc.	10/12/2020	(951)320-7325
	<b>Cost Estimate Certifier</b>	<b>Date</b>	<b>Phone</b>

Approved by Project Manager	Mark Hager, HDR Engineering Inc.	10/12/2020	(951)320-7343
	<b>Project Manager</b>	<b>Date</b>	<b>Phone</b>





**SECTION 1: EARTHWORK**

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	22,436	x	24.00	= \$	538,464
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
170105	Clearing & Grubbing	ACRE	2.9	x	5,000.00	= \$	15,000
170101	Develop Water Supply	LS	1	x	80,000.00	= \$	80,000
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit				= \$	-

<b>TOTAL EARTHWORK SECTION ITEMS</b>	<b>\$</b>	<b>633,500</b>
--------------------------------------	-----------	----------------

**SECTION 2: PAVEMENT STRUCTURAL SECTION**

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement (0.90')	CY	10,682	x	250.00	= \$	2,670,500
400050	Continuously Reinforced Concrete Pavement (1')	CY	6,151	x	300.00	= \$	1,845,300
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280000	Lean Concrete Base	CY		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A, 0.25')	TON	3,010	x	145.00	= \$	436,450
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
393004	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
260203	Class 2 Aggregate Base (1.05')	CY	12,462	x	45.00	= \$	560,790
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250201	Class 2 Aggregate Subbase (0.7')	CY	4,306	x	45.00	= \$	193,770
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON		x		= \$	-
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
398000	Remove Asphalt Concrete Pavement	CY	9,440	x	35.00	= \$	330,400
832070	Vegetation Control (Minor Concrete)	SQYD	60	x	180.00	= \$	10,800

<b>TOTAL PAVEMENT STRUCTURAL SECTION ITEMS</b>	<b>\$</b>	<b>6,048,100</b>
--	-----------	------------------

**SECTION 3: DRAINAGE**

Item code		Unit	Quantity		Unit Price (\$)		Cost
15080X	Remove Culvert	EA/LF	x	=	\$	=	-
150820	Modify Inlet	EA	x	=	\$	=	-
155232	Sand Backfill	CY	x	=	\$	=	-
15020X	Abandon Culvert	EA/LF	x	=	\$	=	-
152430	Adjust Inlet	LF	x	=	\$	=	-
155003	Cap Inlet	EA	x	=	\$	=	-
194001	Ditch Excavation	CY	3	x	145.00	=	435
390132	Hot Mixed Asphalt (Type A)	TON	6	x	250.00	=	1,500
394090	Place Hot Mixed Asphalt (Miscellaneous Area)	SQYD	35	x	170.00	=	5,950
510501	Minor Concrete	CY	x	=	\$	=	-
510094	Structural Concrete (Drainage Inlet)	CY	24	x	3,085.00	=	74,040
5105XX	Minor Concrete (Type XX)	CY	x	=	\$	=	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	=	\$	=	-
6411XX	XX" Plastic Pipe	LF	x	=	\$	=	-
650018	24" Reinforced Concrete Pipe	LF	3,090	x	200.00	=	618,000
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	=	\$	=	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	=	\$	=	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	=	\$	=	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	=	\$	=	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	=	\$	=	-
7050XX	XX" Steel Flared End Section	EA	x	=	\$	=	-
703233	Grated Line Drain	LF	x	=	\$	=	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	=	\$	=	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	=	\$	=	-
721420	Concrete (Ditch Lining)	CY	x	=	\$	=	-
721430	Concrete (Channel Lining)	CY	x	=	\$	=	-
750001	Miscellaneous Iron and Steel	LB	8,242	x	20.00	=	164,840
839473	Concrete Barrier (Type 60 W)	LF	4,075	x	160.00	=	652,000
	Water Quality BMPs Lump Sum	LS	1	x	375,000.00	=	375,000
	Trash Capture Devices	LS	1	x	75,000.00	=	75,000

**TOTAL DRAINAGE ITEMS \$ 1,966,800**

**SECTION 4: SPECIALTY ITEMS**

Item code		Unit	Quantity		Unit Price (\$)		Cost
080050	Progress Schedule (Critical Path Method)	LS	x	=	\$	=	-
582001	Sound Wall (Masonry Block)	LS	x	=	\$	=	-
510530	Minor Concrete (Wall)	CY	x	=	\$	=	-
15325X	Remove Sound Wall	LF/LS	x	=	\$	=	-
070030	Lead Compliance Plan	LS	1	x	15,000.00	=	15,000
141120	Treated Wood Waste	LB	x	=	\$	=	-
839774	Remove Concrete Barrier	LF	483	x	30.00	=	14,490
150662	Remove Metal Beam Guard Railing	LF	29,233	x	9.00	=	263,097
150668	Remove Flared End Section	EA	x	=	\$	=	-
8000XX	Chain Link Fence (Type XX)	LF	x	=	\$	=	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	=	\$	=	-
832001	Metal Beam Guard Railing	LF	x	=	\$	=	-
832005	Midwest Guardrail System	LF	113	x	40.00	=	4,520
839301	Single Thrie Beam Barrier	LF	x	=	\$	=	-
839310	Double Thrie Beam Barrier	LF	x	=	\$	=	-
839521	Cable Railing	LF	x	=	\$	=	-
8395XX	Terminal System (Type CAT)	EA	x	=	\$	=	-
839585	Alternative Flared Terminal System	EA	x	=	\$	=	-
839584	Alternative In-line Terminal System	EA	1	x	4,300.00	=	4,300
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	=	\$	=	-
839XXX	Crash Cushion (Insert Type)	EA	x	=	\$	=	-
839706	Concrete Barrier (Type 60G Mod)	LF	94	x	220.00	=	20,680
839708	Concrete Barrier (Type 60GC)	LF	9,999	x	100.00	=	999,900
839709	Concrete Barrier (Type 60GE)	LF	987	x	260.00	=	256,620
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	=	\$	=	-
510060	Structural Concrete, Retaining Wall	CY	x	=	\$	=	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	=	\$	=	-
511035	Architectural Treatment	SQFT	x	=	\$	=	-
598001	Anti-Graffiti Coating	SQFT	x	=	\$	=	-
203070	Rock Stain	SQFT	x	=	\$	=	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	=	\$	=	-
83954X	Transition Railing (Type WB-31)	EA	1	x	4,000.00	=	4,000
597601	Prepare and Stain Concrete	SQFT	x	=	\$	=	-
839561	Rail Tensioning Assembly	EA	x	=	\$	=	-
83958X	End Anchor Assembly (Type X)	EA	x	=	\$	=	-
XXXXXX	Some Item	Unit	x	=	\$	=	-

**TOTAL SPECIALTY ITEMS \$ 1,582,700**

**SECTION 5: ENVIRONMENTAL**

**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
	LS	1	x 100,000.00 = \$	100,000
130670	LF		x = \$	-
141000	LF	3,600	x 5.00 = \$	18,000
146002	LS	1	x 50,000.00 = \$	50,000
<i>Subtotal Environmental Mitigation</i>				<b>\$ 168,000</b>

**5B - LANDSCAPE AND IRRIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX	LS		x = \$	-
20XXXX	LS		x = \$	-
204099	LS		x = \$	-
204101	LS		x = \$	-
20XXXX	LS		x = \$	-
150685	LS		x = \$	-
20XXXX	LS		x = \$	-
206400	LS		x = \$	-
21011X	CY/TON		x = \$	-
20XXXX	sqft/sqyd		x = \$	-
200122	SQYD		x = \$	-
208304	EA		x = \$	-
2087XX	LF		x = \$	-
20890X	LF		x = \$	-
	LS	1	x 30,000.00 = \$	30,000
<i>Subtotal Landscape and Irrigation</i>				<b>\$ 30,000</b>

**5C - EROSION CONTROL**

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010	EA		x = \$	-
210350	LF		x = \$	-
210360	LF		x = \$	-
2102XX	SQFT		x = \$	-
21025X	sqft/acre		x = \$	-
210300	SQFT		x = \$	-
210420	SQFT		x = \$	-
210430	SQFT		x = \$	-
210600	SQFT		x = \$	-
210630	SQFT		x = \$	-
<i>Subtotal Erosion Control</i>				<b>\$ -</b>

**5D - NPDES**

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300	LS	1	x 200,000.00 = \$	200,000
130200	LS		x = \$	-
130100	LS	1	x 270,000.00 = \$	270,000
130330	EA		x = \$	-
130310	EA		x = \$	-
130320	EA		x = \$	-
130520	SQYD		x = \$	-
130550	SQYD		x = \$	-
130505	EA		x = \$	-
130640	LF		x = \$	-
130900	LS		x = \$	-
130710	EA		x = \$	-
130610	LF		x = \$	-
130620	EA		x = \$	-
130730	LS		x = \$	-
	LS	1	x 400,000.00 = \$	400,000
<i>Subtotal NPDES</i>				<b>\$ 870,000</b>

<b>TOTAL ENVIRONMENTAL</b>	<b>\$ 1,068,000</b>
----------------------------	---------------------

**Supplemental Work for NPDES**

066595	LS	1	x 15,000.00 = \$	15,000
066596	LS	1	x 10,000.00 = \$	10,000
066597	LS	1	x 5,000.00 = \$	5,000
XXXXXX	LS		x = \$	-
<i>Subtotal Supplemental Work for NDPS</i>				<b>\$ 30,000</b>

\*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

\*\*Applies to both SWPPPs and WPCP projects.

\*\*\* Applies only to project with SWPPPs.

**SECTION 6: TRAFFIC ITEMS**

**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460	Lighting and Sign Illumination	LS	x	= \$ -
860201	Signal and Lighting	LS	x	= \$ -
860990	Closed Circuit Television System	LS	x	= \$ -
86110X	Ramp Metering System (Location X)	LS	x	= \$ -
86070X	Interconnection Conduit and Cable	LF/LS	x	= \$ -
560218	Furnish Sign Structure (Truss)	EA	2 x 90,000.00	= \$ 180,000
560219	Install Sign Structure (Truss)	EA	2 x 10,000.00	= \$ 20,000
490605	36" Cast-in-drilled-hole Conc Piling (Sign Found)	LF	60 x 1,000.00	= \$ 60,000
870111	Inductive Loop Detectors	EA	10 x 750.00	= \$ 7,500
870600	Traffic Monitoring Station System	LS	90,000 x 3.00	= \$ 270,000
15075X	Remove Sign Structure	EA/LS	x	= \$ -
151581	Reconstruct Sign Structure	EA	x	= \$ -
152641	Modify Sign Structure	EA	x	= \$ -
860090	Maintain Existing Traffic Management System Eler	LS	x	= \$ -
86XXXX	Fiber Optic Conduit System	LS	x	= \$ -
<i>Subtotal Traffic Electrical</i>				<b>\$ 537,500</b>

**6B - Traffic Signing and Striping**

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011	Roadside Sign - One Post	EA	3 x 420.00	= \$ 1,260
566012	Roadside Sign - Two Post	EA	x	= \$ -
5602XX	Furnish Sign	SQFT	x	= \$ -
568016	Install Sign Panel on Existing Frame	SQFT	x	= \$ -
150711	Remove Painted Traffic Stripe	LF	65,275 x 0.70	= \$ 45,693
141101	Remove Yellow Painted Traffic Stripe (Haz Was)	LF	31,017 x 0.60	= \$ 18,610
150712	Remove Painted Pavement Marking	SQFT	x	= \$ -
150742	Remove Roadside Sign	EA	3 x 190.00	= \$ 570
152320	Reset Roadside Sign	EA	x	= \$ -
152390	Relocate Roadside Sign	EA	x	= \$ -
82010X	Delineator (Class X)	EA	x	= \$ -
840502	Thermoplastic Traffic Stripe (Enhanced Wet Night	LF	95,931 x 0.55	= \$ 52,762
846012	Thermoplastic Crosswalk and Pavement Marking (	SQFT	x	= \$ -
120090	Construction Area Signs	LS	x	= \$ -
84XXXX	Permanent Pavement Delineation	LS	x	= \$ -
120204	Portable Radar Speed Feedback Sign System Day	LS	1 x 29,040.00	= \$ 29,040
129152	Temporary Radar Speed Feedback Sign System	EA	2 x 12,000.00	= \$ 24,000
<i>Subtotal Traffic Signing and Striping</i>				<b>\$ 171,935</b>

**6C - Traffic Management Plan**

Item code	Unit	Quantity	Unit Price (\$)	Cost
			x	= \$ -
<i>Subtotal Traffic Management Plan</i>				<b>\$ -</b>

**6D - Stage Construction and Traffic Handling**

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199	Traffic Plastic Drum	EA	x	= \$ -
12016X	Channelizer (Type X)	EA	x	= \$ -
120120	Type III Barricade	EA	x	= \$ -
129100	Temporary Crash Cushion Module	EA	x	= \$ -
120100	Traffic Control System	LS	1 x 300,000.00	= \$ 300,000
129110	Temporary Crash Cushion	EA	x	= \$ -
129000	Temporary Railing (Type K)	LF	30,000 x 12.70	= \$ 381,000
120149	Temporary Pavement Marking (Paint)	SQFT	x	= \$ -
82010X	Delineator (Class X)	EA	x	= \$ -
XXXXXX	Some Item	Unit	x	= \$ -
<i>Subtotal Stage Construction and Traffic Handling</i>				<b>\$ 681,000</b>

<b>TOTAL TRAFFIC ITEMS</b>	<b>\$ 1,390,500</b>
----------------------------	---------------------

**SECTION 7: DETOURS**

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101	Roadway Excavation	CY	x	= \$ -
19801X	Imported Borrow	CY/TON	x	= \$ -
390132	Hot Mix Asphalt (Type A)	TON	x	= \$ -
26020X	Class 2 Aggregate Base	TON/CY	x	= \$ -
250401	Class 4 Aggregate Subbase	CY	x	= \$ -
130620	Temporary Drainage Inlet Protection	EA	x	= \$ -
129000	Temporary Railing (Type K)	LF	x	= \$ -
128601	Temporary Signal System	LS	x	= \$ -
120149	Temporary Pavement Marking (Paint)	SQFT	x	= \$ -
80010X	Temporary Fence (Type X)	LF	x	= \$ -
XXXXXX	Some Item	Unit	x	= \$ -
<b>TOTAL DETOURS</b>				<b>\$ -</b>

SUBTOTAL SECTIONS 1 through 7    \$    12,689,600

**SECTION 8: MINOR ITEMS**

<b>8A - Americans with Disabilities Act Items</b>				
ADA Items			1.0%	\$ 126,896
<b>8B - Bike Path Items</b>				
Bike Path Items			1.0%	\$ 126,896
<b>8C - Other Minor Items</b>				
Other Minor Items			8.0%	\$ 1,015,168
Total of Section 1-7		\$ 12,689,600	x 3.0%	= \$ 380,688
<b>TOTAL MINOR ITEMS</b>				<b>\$ 380,700</b>

**SECTIONS 9: MOBILIZATION**

Item code				
999990	Total Section 1-8	\$ 13,070,300	x 10%	= \$ 1,307,030
<b>TOTAL MOBILIZATION</b>				<b>\$ 1,307,100</b>

**SECTION 10: SUPPLEMENTAL WORK**

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	1 x 10,500.00	= \$ 10,500
066094	Value Analysis	LS	x	= \$ -
066070	Maintain Traffic	LS	1 x 225,000.00	= \$ 225,000
066919	Dispute Resolution Board	LS	1 x 15,000.00	= \$ 15,000
066921	Dispute Resolution Advisor	LS	x	= \$ -
066015	Federal Trainee Program	LS	1 x 20,000.00	= \$ 20,000
066610	Partnering	LS	1 x 50,000.00	= \$ 50,000
066204	Remove Rock and Debris	LS	x	= \$ -
066222	Locate Existing Crossover	LS	x	= \$ -
066861	Maintain Existing and Temporary Electrical Sys	LS	1 x 15,000.00	= \$ 15,000
066578	Portable Changeable Message Signs	LS	1 x 75,000.00	= \$ 75,000
<i>Cost of NPDES Supplemental Work specified in Section 5D</i>				<i>= \$ 30,000</i>
Total Section 1-8		\$ 13,070,300	0%	= \$ -
<b>TOTAL SUPPLEMENTAL WORK</b>				<b>\$ 440,500</b>

**SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES**

Item code		Unit	Quantity		Unit Price (\$)	=	Cost
066105	Resident Engineers Office	LS	1	x	80,000.00	=	\$80,000
066063	Traffic Management Plan - Public Information	LS	1	x	200,000.00	=	\$200,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS	1	x	286,900.00	=	\$286,900
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS	1	x	50,000.00	=	\$50,000
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8			\$ 13,070,300		0%	= \$	-
<b>TOTAL STATE FURNISHED</b>							<b>\$616,900</b>

**SECTION 12: TIME-RELATED OVERHEAD**

Total of Roadway and Structures Contract Items excluding Mobilization \$14,664,200 (used to calculate TRO)  
 Total Construction Cost (excluding TRO and Contingency) \$17,173,600 (used to check if project is greater than \$5 million excluding contingency)

Estiamted Time-Related Overhead (TRO) Percentage (0% to 10%) = 5%

Item code		Unit	Quantity		Unit Price (\$)	=	Cost
070018	Time-Related Overhead	WD	330	X	\$2,222	=	\$733,300
<b>TOTAL TIME-RELATED OVERHEAD</b>							<b>\$733,300</b>

Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

**SECTION 13: ROADWAY CONTINGENCY**

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-12	\$	16,168,100	x	15%	=	\$2,425,215	
<b>TOTAL CONTINGENCY</b>							<b>\$2,425,300</b>

**II. STRUCTURE ITEMS**

**Bridge 1**

DATE OF ESTIMATE	06/14/18	00/00/00	00/00/00
Bridge Name	Oak Glen/Wilson Creek Bridge	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Bridge Number	54-0648	57-XXX	57-XXX
Structure Type	3 Span, PC/PS Conc. Girder	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	36 LF	0 LF	0 LF
Total Bridge Length (Feet)	115 LF	0 LF	0 LF
Total Area (Square Feet)	4140 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	4 LF	0 LF	0 LF
Footing Type (pile or spread)	Pile	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$350	\$0	\$0

<b>COST OF EACH</b>	<b>\$1,449,000</b>	<b>\$0</b>	<b>\$0</b>
---------------------	--------------------	------------	------------

DATE OF ESTIMATE	00/00/00	00/00/00	00/00/00
Name	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX	57-XXX	57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF	0 LF	0 LF
Total Length (Feet)	0 LF	0 LF	0 LF
Total Area (Square Feet)	0 SQFT	0 SQFT	0 SQFT
Structure Depth (Feet)	0 LF	0 LF	0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$100	\$0	\$0

<b>COST OF EACH</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
---------------------	------------	------------	------------

<b>TOTAL COST OF BRIDGES</b>	<b>\$1,449,000</b>
------------------------------	--------------------

<b>TOTAL COST OF BUILDINGS</b>	<b>\$0</b>
--------------------------------	------------

Structures Mobilization Percentage	10%	<b>\$144,900</b>
------------------------------------	-----	------------------

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	<b>\$144,900</b>
-----------------------------------	-----	------------------

<b>TOTAL COST OF STRUCTURES</b>	<b>\$1,738,800</b>
---------------------------------	--------------------

Estimate Prepared By: \_\_\_\_\_  
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

\_\_\_\_\_  
 Date

### III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0	
	A2)	SB-1210	\$	0	
B)		Acquisition of Offsite Mitigation	\$	0	
C)	C1)	Utility Relocation (State Share)	\$	0	
	C2)	Potholing (Design Phase)	\$	0	
D)		Railroad Acquisition	\$	0	
E)		Clearance / Demolition	\$	0	
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0	
G)		Title and Escrow	\$	0	
H)		Environmental Review	\$	0	
I)		Condemnation Settlements	<u>0%</u>	\$	0
J)		Design Appreciation Factor	<u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$		

L) 

<b>TOTAL RIGHT OF WAY ESTIMATE</b>	<b>\$0</b>
------------------------------------	------------

M) 

<b>TOTAL R/W ESTIMATE: Escalated</b>	<b>\$0</b>
--------------------------------------	------------

N) 

<b>RIGHT OF WAY SUPPORT</b>	<b>\$0</b>
-----------------------------	------------

Support Cost Estimate Prepared By Julian Hernandez, P.E. (951)320-7325  
Project Coordinator<sup>1</sup> Phone

Utility Estimate Prepared By Julian Hernandez, P.E. (951)320-7325  
Utility Coordinator<sup>2</sup> Phone

R/W Acquisition Estimate Prepared By Julian Hernandez, P.E. (951)320-7325  
Right of Way Estimator<sup>3</sup> Phone

Note: Items G & H applied to items A + B

<sup>1</sup> When estimate has Support Costs only

<sup>2</sup> When estimate has Utility Relocation

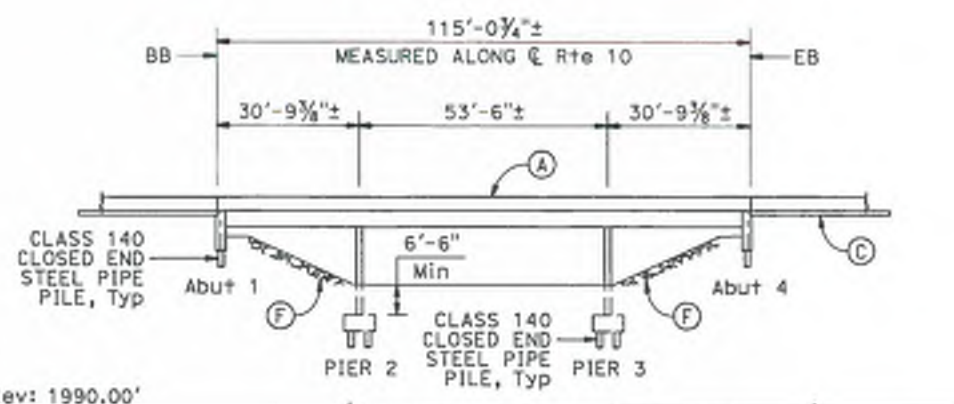
<sup>3</sup> When R/W Acquisition is required



# **ATTACHMENT D**

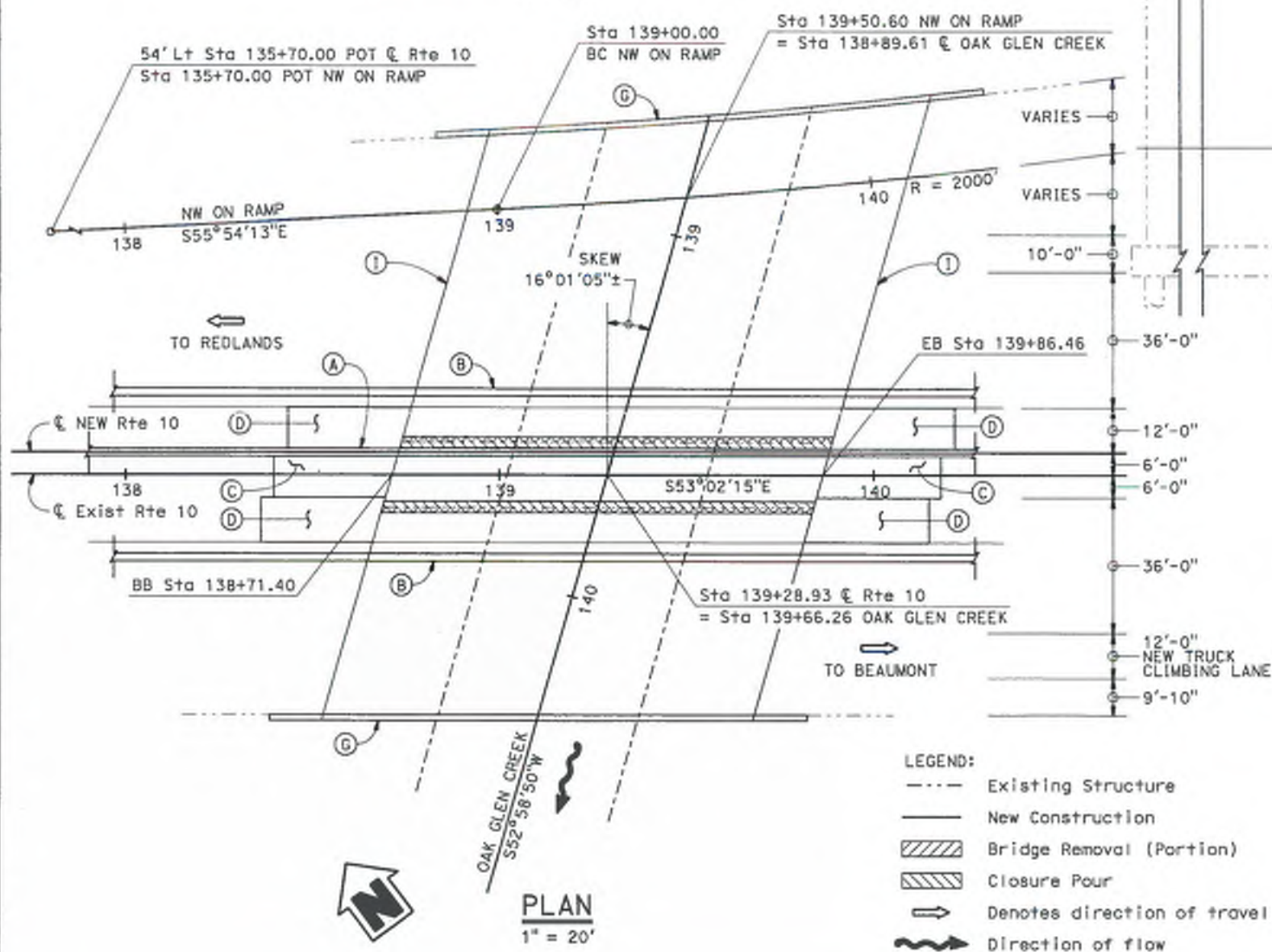
## **Advance Planning Study**

DIST	COUNTY	ROUTE	POST MILE
08	SBd	10	R36.9



ELEVATION AT C RTE 10

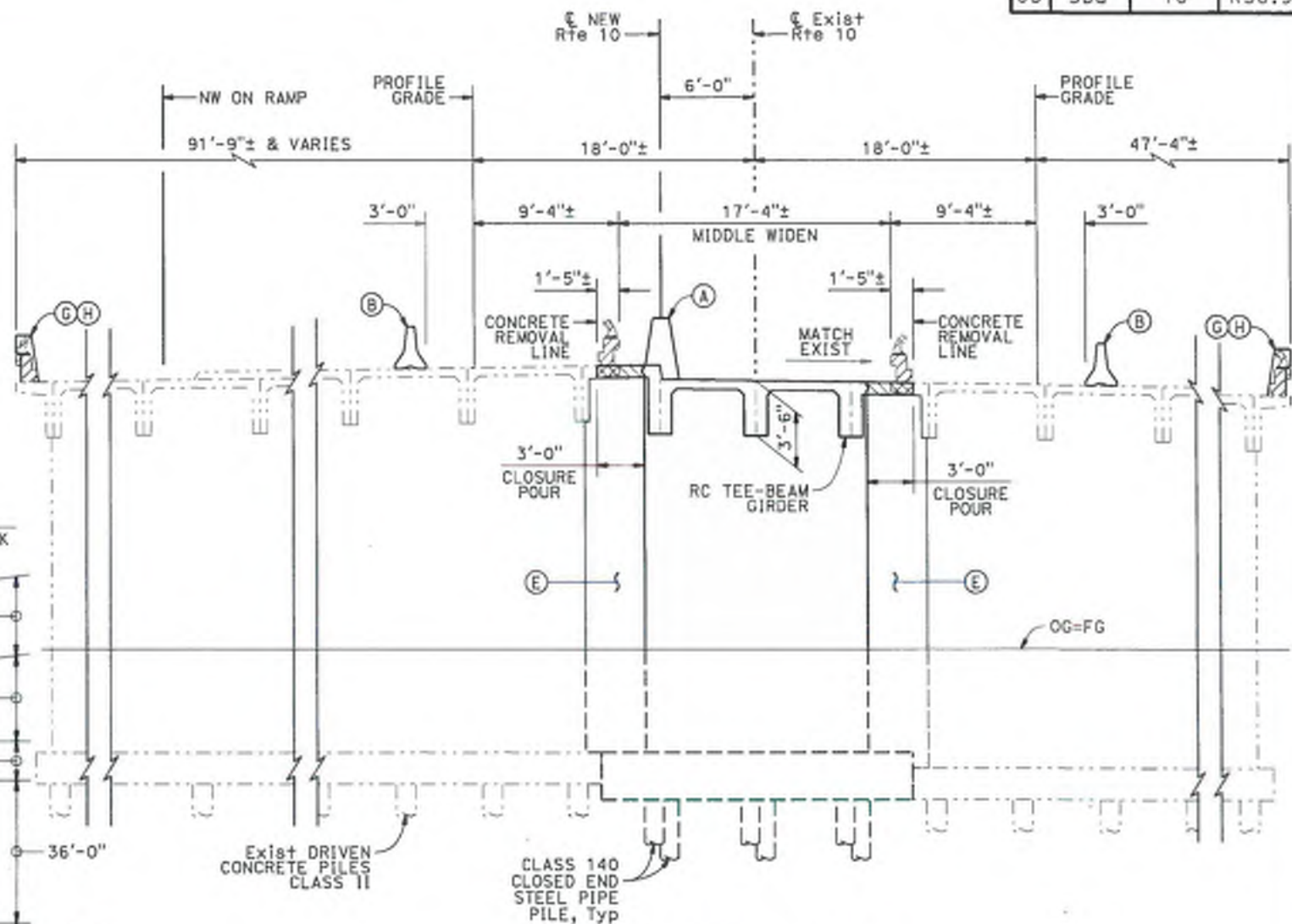
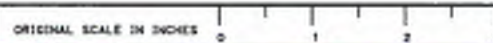
1" = 20'



PLAN

1" = 20'

- LEGEND:
- Existing Structure
  - New Construction
  - ▨ Bridge Removal (Portion)
  - ▨ Closure Pour
  - Denotes direction of travel
  - ~ Direction of flow



TYPICAL SECTION

1" = 5'

NOTES:

- (A) Concrete Barrier Type 60A (MOO)
- (B) Temporary Railing Type K, see "ROADWAY PLANS"
- (C) Structure Approach Type N(300)
- (D) Structure Approach Type R(300)
- (E) Infill Wall
- (F) Remove and replace rip rap, see "ROADWAY PLANS"
- (G) Concrete Barrier Type 736
- (H) Existing Barrier Railing Type 1 to be removed
- (I) Joint Seal Type A (MR = 1/2")

ASSUMPTIONS:

1. Temp shoring will be required for pier foundation excavation and construction.
2. Site liquefaction potential is low. Liquefaction potential and resultant lateral spreading will be determined after a subsurface investigation is performed.
3. Existing profile and cross slope to be maintained.
4. Widening requires restriping of lane lines.
5. This project may require permits. District to investigate early.
6. As-built stations and datum shown.

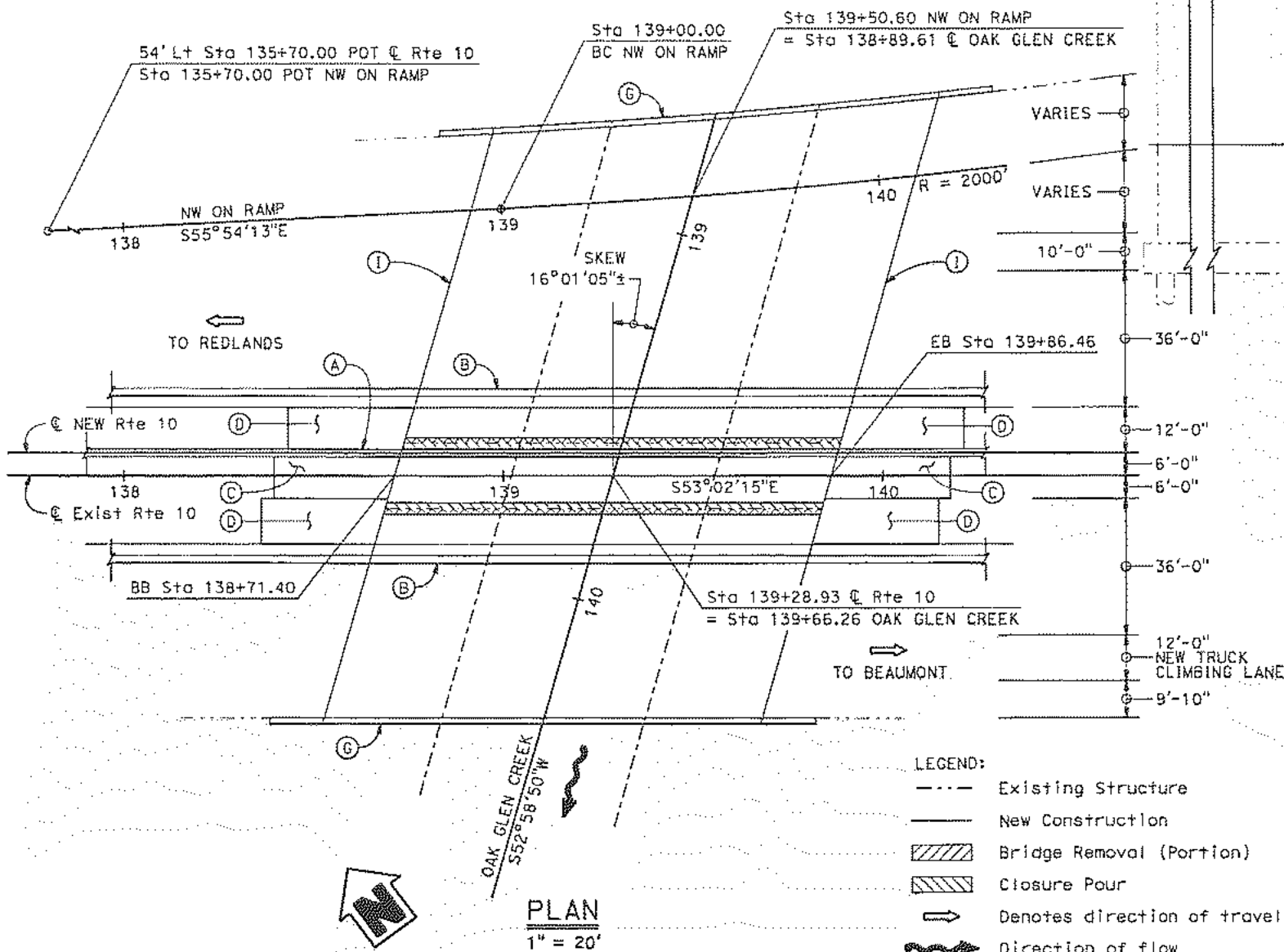
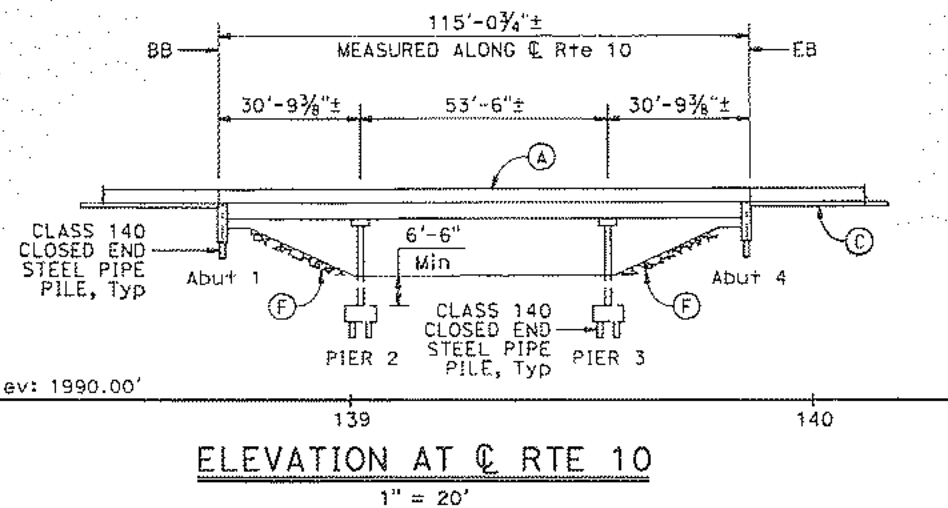
DESIGNED BY	C. Sanchez	DATE	02/22/16
DRAWN BY	P. Perez	DATE	02/22/16
CHECKED BY	P. Rimal	DATE	02/22/16
APPROVED	M. Pezeshpour	DATE	02/22/16

STRUCTURE DESIGN BRANCH  
**21**

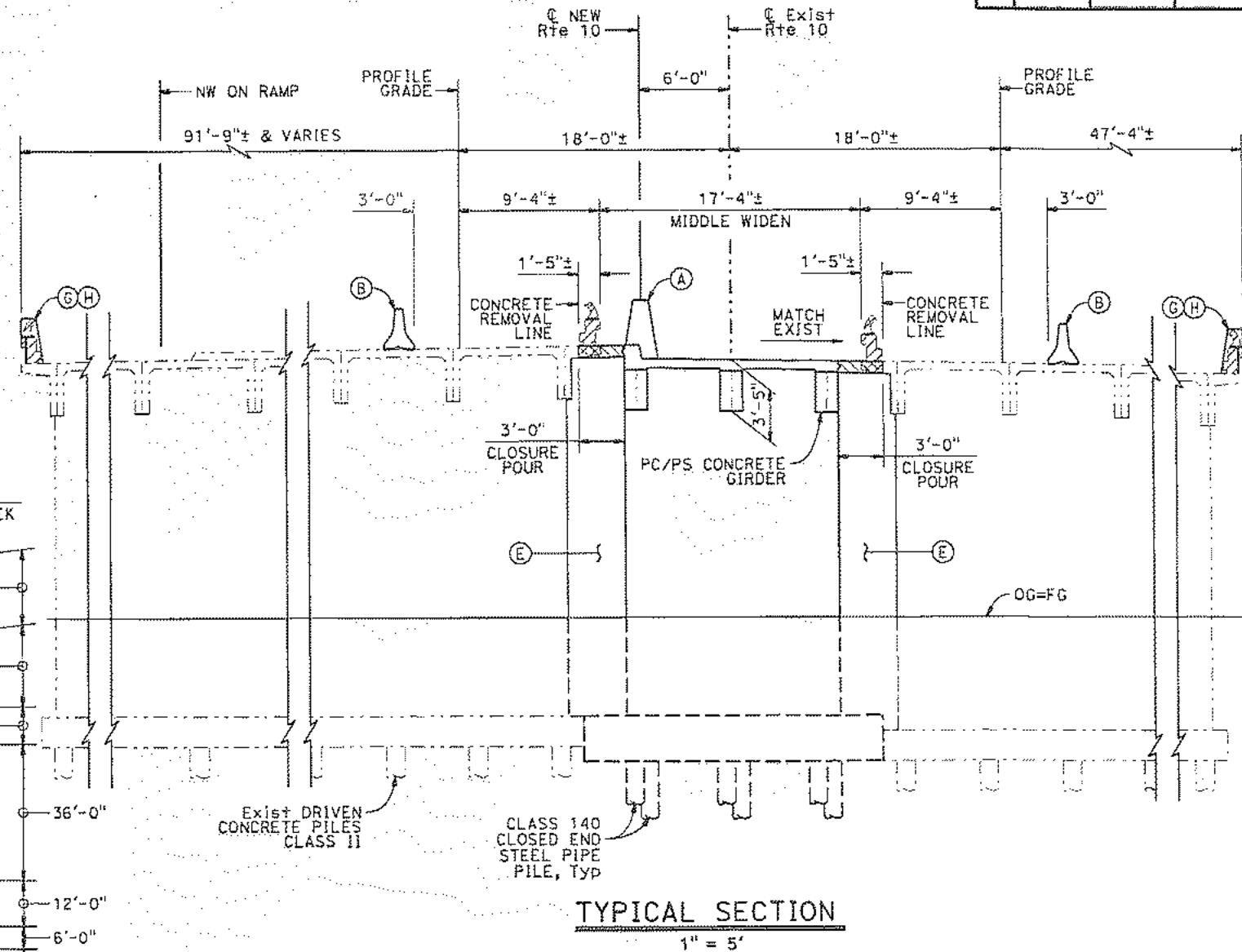
ALTERNATIVE 1	
PLANNING STUDY	
OAK GLEN CREEK	
UNIT: 3623	BRIDGE No. 54-0648
SCALE: X	PROJECT No. & PHASE: 0815000050

CONTRACT No.: 08-1F760K

DIST	COUNTY	ROUTE	POST MILE
08	SBd	10	R36.9



- LEGEND:**
- Existing Structure
  - New Construction
  - ▨ Bridge Removal (Portion)
  - ▨ Closure Pour
  - Denotes direction of travel
  - ~ Direction of flow



- NOTES:**
- (A) Concrete Barrier Type 60A (MOD)
  - (B) Temporary Railing Type K, see "ROADWAY PLANS"
  - (C) Structure Approach Type N(30D)
  - (D) Structure Approach Type R(30D)
  - (E) Infill Wall
  - (F) Remove and replace rip rap, see "ROADWAY PLANS"
  - (G) Concrete Barrier Type 736
  - (H) Existing Barrier Railing Type 1 to be removed
  - (I) Joint Seal Type A (MR = 1/2")

- ASSUMPTIONS:**
1. Temp shoring will be required for pier foundation excavation and construction.
  2. Site liquefaction potential is low. Liquefaction potential and resultant lateral spreading will be determined after a subsurface investigation is performed.
  3. Existing profile and cross slope to be maintained.
  4. Widening requires restriping of lane lines.
  5. This project may require permits. District to investigate early.
  6. As-built stations and datum shown.

DESIGNED BY	C. Sanchez	DATE	02/22/16
DRAWN BY	P. Perez	DATE	02/22/16
CHECKED BY	P. Rimal	DATE	02/22/16
APPROVED	M. Pezeshpour	DATE	02/22/16

**STRUCTURE DESIGN BRANCH**  
**21**

ALTERNATIVE 2	
PLANNING STUDY	
OAK GLEN CREEK	
UNIT: 3623	BRIDGE No. 54-0648
SCALE: X	PROJECT No. & PHASE: 081500050

# **ATTACHMENT E**

## **Right of Way Data Sheet**

**RIGHT OF WAY DATA SHEET FOR LOCAL PUBLIC AGENCIES**

(Form #)

To: Rebecca Guirado  
Deputy District Director  
Division of Right of Way

Date: 10/12/2020

Co. SBd/Riv Rte. I-10  
Expense Authorization 1F7600

Attention: Milele Robertson  
Senior Right of Way Agent  
Local Programs

Subject: **RIGHT OF WAY DATA SHEET - LOCAL PUBLIC AGENCIES**

Project Description: I-10/Eastbound Truck Climbing Lane D08-SBd/Riv-10 PM 36.4-R39.2/R0.0-R0.2

Right of way necessary for the subject project will be the responsibility of SBCTA

The information in this data sheet was developed by HDR Engineering Inc.

I. **Right of Way Engineering**

Will Right of Way Engineering be required for this project?

- No X
- Yes \_\_\_\_\_ (Submit a copy of the *Right of Way Engineering Surveys and Mapping Services checklist for Locally Funded Projects*. This checklist includes, but is not limited to, the following items.)

- Hard copy (base map) \_\_\_\_\_
- Appraisal map \_\_\_\_\_
- Acquisition Documents \_\_\_\_\_
- Property Transfer Documents \_\_\_\_\_
- R/W Record Map \_\_\_\_\_
- Record of Survey \_\_\_\_\_

II. **Engineering Surveys**

1. Is any surveying or photogrammetric mapping required?

No \_\_\_\_\_ Yes X (Complete the following.)

2. **Datum Requirements**

Yes X Project will adhere to the following criteria:

- Horizontal - datum policy is NAD 83, CA-HPGN, EPOCH 1991.35 and English system of units and measures.
- Vertical - datum policy is NAVD 88.
- Units - metric is not required.

No \_\_\_\_\_ Provide an explanation on additional page.

3. Will land survey monument perpetuation be scoped into the project, if required?

Yes X

No \_\_\_\_\_ Provide explanation on additional page.

R/W Data Sheet - Local Public Agencies  
Page 2 of 5

III. **Parcel Information (Land and Improvements)**

Are there any property rights required within the proposed project limits?

No X Yes \_\_\_\_\_ (Complete the following.)

	Part Take	Full Take	Estimate \$
A. Number of Vacant Land Parcels	<u>0</u>	<u>0</u>	\$ <u>0</u>
B. Number of Single Family Residential Units	<u>0</u>	<u>0</u>	\$ <u>0</u>
C. Number of Multifamily Residential Units	<u>0</u>	<u>0</u>	\$ <u>0</u>
D. Number of Commercial/Industrial Parcels	<u>0</u>	<u>0</u>	\$ <u>0</u>
E. Number of Farm/Agricultural Parcels	<u>0</u>	<u>0</u>	\$ <u>0</u>
F. Permanent and/or Temporary Easements	<u>0</u>	<u>0</u>	\$ <u>0</u>
G. Other Parcels (define in "Remarks" section)	<u>0</u>	<u>0</u>	\$ <u>0</u>
Totals	<u>0</u>	<u>0</u>	\$ <u>0</u>

Provide a general description of the right of way and excess lands required (zoning, use, improvements, critical, or sensitive parcels, etc.).

All permanent improvements will be located within the existing State right of way.

IV. **Dedications**

Are there any property rights which have been acquired, or anticipate will be acquired, through the "dedication" process for the Project?

No X Yes \_\_\_\_\_ (Complete the following.)

Number of dedicated parcels 0

Have the dedication parcel(s) been accepted by the municipality involved? N/A

V. **Excess Lands / Relinquishments**

Are there Caltrans property rights which may become excess lands or potential relinquishment areas?

No X Yes \_\_\_\_\_ (Provide an explanation on additional page.)

VI. **Relocation Information**

Are relocation displacements anticipated?

No  X  Yes \_\_\_\_\_ (Complete the following.)

A. Number of Single Family Residential Units	<u> 0 </u>	
Estimated RAP Payments		\$ <u> 0 </u>
B. Number of Multifamily Residential Units	<u> 0 </u>	
Estimated RAP Payments		\$ <u> 0 </u>
C. Number of Business/Nonprofit	<u> 0 </u>	
Estimated RAP Payments		\$ <u> 0 </u>
D. Number of Farms	<u> 0 </u>	
Estimated RAP Payments		\$ <u> 0 </u>
E. Other (define in the "Remarks" section)	<u> 0 </u>	
Estimated RAP Payments		\$ <u> 0 </u>
 Totals	 <u> 0 </u>	 \$ <u> 0 </u>

VII. **Utility Relocation Information**

Do you anticipate any utility facilities or utility rights of way to be affected?

No  X  Yes \_\_\_\_\_ (Complete the following.)

Facility	Owner	Estimated Relocation Expense		
		State Obligation	Local Obligation	Utility Owner Obligation
A.		\$0	\$0	\$0
B.		\$0	\$0	\$0
C.		\$0	\$0	\$0
D.		\$0	\$0	\$0
E.		\$0	\$0	\$0
F.		\$0	\$0	\$0
Totals		\$0	*	\$0
Number of facilities		0	0	0

\*This amount reflects the estimated total financial obligation by the State.

**Explanation for Section V - Excess Lands/Relinquishments N/A**

VIII. **Rail Information**

Are railroad facilities or railroad rights of way affected?

No  X  Yes \_\_\_\_\_ (Complete the following.)

Describe railroad facilities or railroad rights of way affected.

N/A

Owner's Name	Transverse Crossing	Longitudinal Encroachment
A. N/A	N/A	N/A
B. N/A	N/A	N/A

Discuss types of agreements and rights required from the railroads. Are grade crossings that require services contracts, or grade separations that require construction and maintenance agreements involved? N/A

IX. **Clearance Information**

Are there improvements that require clearance?

No  X  Yes \_\_\_\_\_ (Complete the following.)

A. Number of Structures to be Demolished  0   
 Estimated Cost of Demolition \$  0

X. **Hazardous Materials/Waste**

Are there any site(s) and/or improvements(s) in the Project Limits that are known to contain hazardous materials? None  X  Yes \_\_\_\_\_ (Explain in the "Remarks" section.)

Are there any site(s) and/or improvement(s) in the Project Limits that are suspected to contain hazardous waste? None \_\_\_\_\_ Yes  X  (Explain in the "Remarks" section.)

XI. **Project Scheduling**

	Proposed lead time	Completion date
* Preliminary Engineering, Surveys	<u> 2 </u> (months)	<u> 02-2021 </u>
* R/W Engineering Submittals	<u> N/A </u> (months)	<u> N/A </u>
* R/W Appraisals/Acquisition	<u> N/A </u> (months)	<u> N/A </u>
Proposed Environmental Clearance		<u> 11-2020 </u>
Proposed R/W Certification		<u> 12-2021 </u>



R/W Data Sheet - Local Public Agencies

Page 5 of 5

**XII. Proposed Funding**

	Local	State	Federal	Other
Acquisition (TCE)	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$0
Relocation Assistance Program	\$0	\$0	\$0	\$0
R/W Support	\$0	\$0	\$0	\$0
Cost (Eng. Appraisals, etc.)	\$0	\$0	\$0	\$0

**XIII. Remarks**

According to the results in the Hazmat Report asbestos-containing materials are present in the bridge structure at Wilson Creek, and may be impacted by the proposed construction activities. More specifically the asbestos was found in the bolt shims and epoxy-like materials of the bridges' median guardrails on each side of the freeway. Work performed during any activities that disturb the asbestos containing materials must be done in compliance with the most recent edition of all applicable federal, state, and local regulations, standards, and codes governing abatement, transport, and disposal of asbestos-containing materials.

Project Sponsor Consultant  
Prepared by:



Julian Hernandez, P.E.

Project Engineer  
HDR Engineering Inc.

Project Sponsor  
Reviewed and Approved by:

*P.M.*  
10/13/2020



Paula Beauchamp

Director of Project Delivery and Toll Operations  
SBCTA

10-12-2020

Date

October 13, 2020

Date

Caltrans  
Reviewed and approved based on information provided to date:



Milele Robertson  
Senior Right of Way Agent  
Local Programs

10/22/2020

Date

# **ATTACHMENT F**

## **Transportation Management Plan**

**TRANSPORTATION MANAGEMENT PLAN (TMP) DATA SHEET # 4 for PID, PSR, PR or PSE including DTM requirements for PSE and Construction Phase -**  
**This TMP is valid for two years from date of preparation, unless the project or impact changes.**

T:\DTM.TMP\project docs\SBD-10\0H93\090211\0H9301 Data Sheet # 4.xls (includes signature/background sheet, estimate, table, DTM requirements, and Revisions & Notes)



**EA 08-1F760**                      **DATE**    **10/12/2020**  
**Project No. 815000050**

**Location:** On Interstate 10 eastbound between 16th Street and County Line Road  
**Work:** Pave median, install concrete median barrier and add Truck Climbing Line to Eastbound Direction

**Date of TMP/Review Request Memo:** Not applicable.  
**Documents available:** Geometric Approval Drawings and Draft Project Report

Construction period per PE	
EST START DATE	6/2022
EST END DATE	12/2023
Construction period per WPS	
EST START DATE	N/A
EST END DATE	N/A

**BACKGROUND INFORMATION:**

**DURATION:** 330 WORKING DAYS  
**PROJECT COST:** \$20,333,000  
**TMP ESTIMATE:** \$942,900 or 4.64% OF THE PROJECT COST

IMPACT	High	Medium	Low	NA
STATE HWY			X	
LOCAL RD				X
Ramps/connectors			X	

Details: Mainline paving improvements within the existing median of I-10.

This Transportation Management Plan (TMP) has been prepared under the direction of the following Registered Engineer. The Registered Civil Engineer attests to the technical information contained therein and the engineering data upon which recommendations, conclusions and decisions are based.

Prepared by: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Name:** Julian Hernandez, P.E.  
**Title:** Project Engineer  
**Organization:** HDR Engineering, Inc.  
**Telephone/FAX:** (951) 320-7325  
**email:** [Julian.Hernandez@hdrinc.com](mailto:Julian.Hernandez@hdrinc.com)

Al Afaneh  
TMP/DTM Traffic Manager  
Department of Transportation  
District 8/Operations MS-B20  
464 W 4th Street 6th Floor  
909 383-4917, FAX 909 383-1068  
[Al\\_Afaneh@dot.ca.gov](mailto:Al_Afaneh@dot.ca.gov)

Prepared for

cc:

Project Manager: Ferry R. Fard

Project Senior:

HYahya ,TSasis, or MJabson, Ops Surveillance

MKar (D8 Callbox Coordinator routes to SAFEs as needed. Also concerned if loops for supercallboxes or census stations are damaged)

Aleuschen  
RMelgoza

SLombardo  
TLagana  
Traci Peterson  
Twatkins

VGau  
MBoone  
BWasser or LSartori  
RTadi

MHess  
UApabio  
DMaleki  
Benjamin Egiebor/D08/Caltrans/CAGov,  
Cuong Tieu/D08/Caltrans/CAGov,  
Kim L Walker/D08/Caltrans/CAGov,  
DTM

DerekWilliams@chp.ca.gov (D8 TMC CHP Officer)  
JoWilson@chp.ca.gov (Inland Division Cozeep/Mazeep Coordinator)

HTupper@chp.ca.gov (CHP Inland Division FSP Coordinator)

If items are checked in Section 5 on the Table tab:

MKirkhoff@sanbag.ca.gov (SANBAG DM Manager)  
KLynn@sanbag.ca.gov

<b>1. Public Information</b>	NO	<input checked="" type="checkbox"/> YES	MAYBE	\$200,000
<b>2. Motorist Information Strategies</b>	NO	<input checked="" type="checkbox"/> YES	MAYBE	\$75,000
<b>3. Incident Management</b>	NO	<input checked="" type="checkbox"/> YES	MAYBE	\$286,900
<b>4. Construction Strategies</b>	NO	<input checked="" type="checkbox"/> YES	MAYBE	\$381,000
<b>5. Demand Management (DM)</b>	<input checked="" type="checkbox"/> NO	YES	MAYBE	\$0
<b>6. Alternate Route Strategies</b>	<input checked="" type="checkbox"/> NO	YES	MAYBE	\$0
<b>7. Other Strategies</b>	<input checked="" type="checkbox"/> NO	YES	MAYBE	\$0
<b>TMP TOTAL</b>				<b>\$ 942,900</b>

**1 Public Information/Public Awareness Campaign (PAC) COST**

**BEES 066063 - Traffic Management Plan Public Information.**  
 Cost to be reduced by Public Affairs (PA) and Construction Liaison (CL) only.

PA COST CL COST  
 \$100,000 \$100,000

- 1.0  Include Rideshare information in PA/CL project material to encourage vehicles reduction in work area
- 1.1  Brochures and Mailers
- 1.2  Media Releases (& minority media sources)
- 1.3  Paid Advertising
- 1.4  Public Information Center/Kiosk
- 1.5  Public Meetings/PAC Mtgs./Speakers Bureau (show cost also for room rental)
- 1.6  Handdeliver notices to vicinity
- 1.7  Broadcast fax service
- 1.8  Telephone Hotline OR
- 1.9  1-800-COMMUTE or 511 (the telephone number is shown on CS-Info signs) - contact Cyrin Kwong, 383-4256, to place msg into the 1800C telephone system.
- 1.10  Visual Information (videos, slide shows, etc.)
- 1.11  Local cable TV and News
- 1.13  Internet, E-mail (SBCTA website)
- 1.14 Notification to targeted groups:
  - Revised Transit Schedules/maps
  - Rideshare organizations
  - schools
  - organizations representing people with disabilities
  - bicycle organizations
- 1.15  Include PA/CL/Consultant resources in WPS
- 1.16  Commercial traffic reporters/feeds - e.g. brief Traffic Information people (TIP) group
- 1.17  Insert SSP (no number at this time)  
 "A representative of the Contractor, at Superintendent level or higher, and authorized to commit the Contractor, shall attend and participate in all Public Awareness Campaign meetings. Time commitment for the meeting(s) varies from two to four hours per month."
- 1.18  Others

Subtotals \$ 100,000 \$ 100,000  
**SUBTOTAL \$200,000**

**2 Traveler Information Strategies**

2.1  Existing Electronic Message Signs (Stationary) - list locations. See Note 5

New Installation (Stationary) - BEES 860530 CHANGEABLE MESSAGE SIGN SYSTEM  
- list locations. See Note 5

2.2  Portable Changeable Message Signs (PCMS).

**Construction prefers Rental Lumpsum BEES 066578 in Supplemental Funds  
And include SSP 12-370**

These PCMS advise motorists to divert at remote advance decision points - outside the usual work limits. Unlike stationary CMS, you are allowed to use them for advance motorist information - e.g. a week ahead. Their placement may need to be cleared **environmentally** so that they can be included in plans and SSP later. They may be in **addition** to Traffic Design's PCMS for regular traffic handling in and next to a work area.

Placement Details: \$75,000

2.3  BEES 860503 Extinguishable Signs (only shown because they are on the TMP Guidelines list. Usually found at Weigh Stations - Weigh Station "open/closed".)

2.4 Ground Mounted Signs / Fabric signs Note 2

C40/40A Double Fine Sign - black and white

BEES 860926 Regulatory speed signs

SC6-4 (per MUTCD) (Ramp will be closed...)

CS-SPECIAL w/ SC6-2 PANEL ("Dates/Days/Hours/Expect delay") Use when conventional highways or local roads will be affected for longer periods. To encourage traffic to detour so delay in your work area is less, use at advance location and add the work location. **Use fabric signs if short duration or fast moving operation.**

CS-INFO/1-800-COMMUTE Panel Sign. **Also see 1.9.**

Blue and white Rideshare guide signs, including website (1-800-COMMUTE/www.commutessmart.info). **Need to be installed at the same time as the funding signs.**

2.5  BEES 860520 Commercial Traffic Radio (usually only applicable in the Upper desert)

Highway Advisory Radio (HAR) - Fixed. List locations here. They can be obtained from TMC Manager. See Note 5.

Highway Advisory Radio - mobile (signs alerting motorists to the HAR will also be needed)  
Contact TMC manager for assistance with specifications to include portable HARs as bid item in the contract. To avoid FCC fines, CT Portable HAR cannot be used except for emergencies. Seldom used. See Note 5

List proposed locations here:

2.6  Lane Closure Web Site

2.7  Caltrans Highway Information Network (CHIN)

2.8  Radar Speed Message Sign (Specter sign) BEES 066064 (approx. EA @ \$30,000)

2.9  Bicycle and pedestrian information, e.g. Detour maps

2.10  Others

**SUBTOTAL** \$75,000

**3 Incident Management**

3.1 CHP's Construction or Maintenance Zone Enhanced Enforcement Program – COZEEP or MAZEEP. **BEES 066062** - show under "State or Agency furnished" in the Cost Estimate. **SSP 12-225 has been deleted per HQ OE.** See note 1.

**Consider the LC hours and add CHP driving time to/from their office**

Hourly Cozeep overtime loaded rate: \$ 95

**COZEEP** - to protect active closures

150	8	1	75	10	2	\$256,500
# of days	hours	# of officers (1 per car)	nights	hours	# of officers (Remember - nights require 2 per car)	

**ECOZEEP** - to mitigate continuous restrictions. Add weekends days if needed.

0	0	0	0	0	0	\$0
# of days	hours	# of officers	nights	hours	see above	

(add weekends days as needed)

**CHP TRAFFIC HANDLING** - reduce delay by keeping traffic flowing and/or to enforce closures - total facility/structure/major traffic shifts/ramps/connectors/local road/extended closures. Freeway closures with local road detours may require **2 officers per intersection** to direct traffic.

0	0	0	0	0	0	\$0
days	hours	# of officers	nights	hours	see above	

CHP Officer in TMC during major construction closures

20	8	1				\$15,200
days	hours	# of officers				

CHP Officer for Command Post during regional impact construction closures

20	8	1				\$15,200
days	hours	# of officers				

**3.1 Total \$286,900**

3.2 BLANK



TMP TABLE	EA	08-1F760	DATE
-----------	----	----------	------

3.3 **Freeway Service Patrol (FSP) for Construction (CFSP)** \$/hr/truck **\$75**  
**BEES 066065** - show under "State or Agency furnished" in the Cost Estimate  
 Short duration or remote area CFSP usually is bid w much higher hourly rates. If enhancement of program FSP feasible, CFSP could tie into the lower long-term FSP rates.

**FOR SERVICE WITHIN REGULAR FSP HOURS:**

**A** days & hrs: 

0	8
---	---

 # of trucks: 

--

**\$0**

**FOR SERVICE OUTSIDE REGULAR FSP HOURS:**

Extend Peak hour coverage

**B** days & hrs: 

0	8
---	---

 # of trucks: 

--

**\$0**

Night support during structure freeway closures and major traffic shifts

**C** days & hrs: 

0	8
---	---

 # of trucks: 

--

**\$0**

Weekend support

**D** days & hrs: 

0	8
---	---

 # of trucks: 

--

**\$0**

Local agency (SAFE) support 8% of truck cost **\$0**

CFSP CHP support 5% of truck cost **\$0**  
 THIS % ONLY IF **WITHIN** REGULAR FSP HOURS AND AREA!

Equipment/Supplies 10% **\$0**  
 % of truck cost unless more detail available

**CONSULT W INLAND DIVISION CHP OR BORDER IN SOUTHERN RIVERSIDE CO. which method is acceptable FOR B,C,D WHICH ARE OUTSIDE REGULAR FSP HOURS OR AREA!**

**Method 1**

CFSP CHP support - including 50% of truck cost **\$0**  
 time for meetings

or

**Method 2**

CFSP Dispatcher @ **\$55** **\$0**  

0	8	0
days/nights	hours	Dispatcher(s)

CFSP CHP Officers (See Cozeep rate) **\$0**  

0	8	0	0	8	0
days	hours	# of officers	nights	hours	

Include time for meetings: **\$0**  

0	8	0	0	8	0
days	hours	# of officers	nights	hours	

- Cooperative Agreement or Task Order with SAFE for **\$0**
- Task Order with CHP (Statewide Master Agreement for FSP support). for **\$0**
- Contact District FSP Coordinator for task orders.
- Service Contract
- Local Agency will arrange CFSP with SAFE
- Local Agency will arrange CFSP administration with CHP

**3.3 Total** **\$0**

TMP TABLE	EA	08-1F760	DATE
-----------	----	----------	------

- 3.4  CHP Helicopter/Airplane
- 3.5  Traffic Surveillance Stations for construction impact mitigation (loop detectors and CCTV)

**Keep existing operational during construction**

- New CCTV
- New loops

3.6 **Call Boxes - also see NOTE 4 in the Revisions & Notes tab**

**TEMPORARY INSTALLATION to mitigate impact** (\$5000/box/move from project funds to SAFE). Project Report/Design PE: Please discuss with the D8 Call box coordinator if it is feasible to keep this motorist aid available during construction. If it is not, please notify TMP, then other mitigation needs to be considered. For location in SBd County see Q:\Ops\Call Boxes\SBD\Excel List. Apparently no list available for Riv County.

callboxes x  moves x \$5,000.00 = \$0

*Add 15% to callbox cost since contractor will need to pay SAFE through CCO.*

- 3.7  911 Cellular Calls
- 3.8  Project needs to provide resources to Transportation Management Center Unit 370 for additional staff during high impact closures
- 3.9  Traffic Management Teams (TMT) needed to assist w system diversion/impact reduction. Project needs to provide resources.  
See 7/3/05 in Tab 6 - Revisions

- 3.10  On-site Traffic Advisor
- 3.11  Others

**SUBTOTAL \$ 286,900**

**4 Construction Strategies**

4.1  Coordinate with adjacent construction and planned projects - also on detour routes.  
[Use SSP 07-850](#)

4.2 This TMP presumes work is planned as below. If different, TMP needs to be revised. The Lead Project Engineer is responsible to include all appropriate closure charts.

- Off peak
- Night
- Weekend

- 4.3
- Flagging
  - Shoulder
  - Lane
  - Street
  - Ramp
  - Connector\*
  - Extended Weekend Closures\*
  - Total Facility Closures\*

\*Consult w TMP and DTM re Cozeep & other cost. Show your detour and traffic diversion plans.

4.4  Contra Flow (put traffic into opposing roadbed)

4.5  Reversible Lanes

4.6  Project Phasing

4.7  [BEES 152372](#) - If K-Rail is placed, consider including cost item for lateral shifting to open a minimum of 2.4 m (8') shoulder space as soon as possible. Please include supplemental work funds in the estimate to pay for the extra work. See Standard Specifications 12-4, Measurement and Payment. \$381,000

4.8  [BEES 129150](#) Temporary Traffic Screens (Gawk Screen - see 5/10/06 entry in Revisions tab)

4.9  Movable Barrier

4.10  Truck Traffic Restrictions

4.11  [BEES 066008](#) Incentives/Disincentives

4.12  [BEES 070010](#) Strictly enforce Constr. Progress Schedule (CPM)

**CAUTION: If the Lane Closure Chart (LCC) for full mainline closures (one or both directions on a highway or freeway) does not show a maximum number of allowable days, the PSE cannot be certified by DTM/TMP.**

Please contact Saleh Yadegari, 4232, to get Delay Calculations, lane closure charts, Table Z and Special events list. Inform him of any concerns/commitments re special LC days, times, season, events; environmental restrictions; if work may be affected by snow and low or high temperatures. E.g. desert heat may delay AC digout curing which may increase traffic impact when vehicles overheat in the queue; etc. IF traffic volumes vary significantly between seasons, consider 2 sets of closure charts to avoid CCOs later.

[Use SSP 12-130 and following](#)

4.13  [Include Specification 12-220](#)

4.15  Delay Damages (DD) Please contact Saleh Yadegari, 4232, regarding Delay Calculations.

4.16  Others

**SUBTOTAL \$ 381,000**

**5 Demand Management (DM)**

**Traffic diversion may increase available work hours.**

- 5.1  A coop will be executed - mentioned in PSR or PR.
- Instead of a coop, 15% is added to the cost of DM elements since the payment to the local agency will be routed through the contractor.
- Instead of a coop, the local agency will make their own arrangements with RCTC/SANBAG.
- PA/CL or local agency need to inform commuters through RCTC/SANBAG. Funds part of PA/CL.
- 5.2  HOV Lanes/Ramps (New or Convert)
- 5.3  Park-and-Ride Lots
- LEASED SPACES (Sponsored spaces may be feasible in exchange for signs and print coverage)
- 5.4  Parking Management/Pricing (Coordination with local agency required)
- 5.5  [BEES 066069](#) Rideshare Promotion
- 5.6 Rideshare Incentives -  
As far as D8 DTM.TMP knows, incentives to individuals cannot be paid by the State, however, State can pay for Local Transportation agency staff time, postage, cost of extra busses, etc.
- Carpool/vanpool
- Transit
- Train
- Light-Rail
- 5.7 [BEES 066066](#)
- Public Transit Support/Improvements/Shuttle Service
- School Shuttle Service
- 5.8  Variable Work Hours
- 5.9  Telecommute
- 5.10  Ramp Metering (Modify or new)
- 5.11  Blue and white Rideshare signs needed - unless already signed. See 2.4
- 5.12  Others

**SUBTOTAL \$ -**

**6 Alternate Route Strategies**

**Traffic diversion may increase available work hours. Please work with Traffic Design.**

- 6.1  Add Capacity to Freeway connector
- 6.2.1  Upstream Ramp Closures needed to avoid conflicts with closure tapers, etc., during construction
- 6.2.2  Upstream Connector Closures needed to avoid conflicts with closure tapers, etc., during construction
- 6.3  Temporary Highway Lanes or Shoulder Use
- 6.4  Parking Restrictions
- 6.5  Street Improvements
- State R/W - Signals, Widen, etc.
- Local R/W - Signals, Widen, etc. Coop or Permit may be needed
- 6.6  Local Street USE - Coop or Permit may be needed
- 6.7  Traffic Control Officers (see 3.1 Cozeep)
- 6.8  Signed detour - using State routes
- 6.9  Signed detour - using local streets and roads
- 6.10  Adjust signals ( time signals to allow detour traffic to flow)
- 6.11  Temporary bicycle or pedestrian facilities
- 6.12  Others

**SUBTOTAL \$ -**

**7 Other Strategies**

- 7.1  Application of new technology
- 7.2  Innovative products
- 7.3  Others

**SUBTOTAL \$ -**

**TOTAL \$ 942,900**

Assistant DTM must be invited by project team starting with the 65% Constructability reviews, in addition to TMP. DTM will review Plan Sheets showing the traffic handling for:

- 1 **Local area** - how local traffic will be routed around construction restrictions. For example, Riv-215 Linden Iowa Overcrossing replacement requires closure of that structure. How will local traffic be routed?
  
- 2 **Vicinity** - how highway and freeway traffic will be routed around construction restrictions and diverted. For example, the Riv-215 Linden Iowa Overcrossing replacement requires freeway closures. One of the elements needed would be signage, usually PCMS, on 60, 91 and 215 ahead of the preceding exits with appropriate messages. The goal is to divert motorists who know the area and therefore reduce the demand on the signed detour.
  
- 3 **Regional** - some work, such as 50% of lanes or connector/freeway closures, or major traffic shifts, etc., require diversion at remote approaches. For example, Riv-215 Linden Iowa Overcrossing replacement requires freeway closures. Therefore PCMS are needed around SBd-10/215, SBd-10/15, EB/WB 60, Riv-15/91, even NB 15/215 in Temecula to encourage motorists to take alternate freeways. Some projects may require diversion into other counties or even States. Projects adjacent to each other or on detour routes for other projects will need to coordinate their closures.

**Please contact Al Afaneh, D8 DTM, 909 383-4917, or the DTM desk, 383-5911, DTM Dist08/D08/Caltrans/CAGov, if you need more information.**

DTM requires these items to approve closures:

- 1 Email from RE or Permit Inspector that they have reviewed and approved the Contractor's Contingency Plan, with the plan attached. This plan shows how the Contractor will resolve problems which could prevent the timely opening of closures.
- 2 Also, the Contractor Plansheets showing the elements which will be functional to divert traffic for the proposed work.
- 3 Depending on the work, Caltrans (CT) or the local agency need an Area, Vicinity, and Regional plan how to divert traffic. This shows which Traffic Operations System (TOS) elements and other resources such as Cozeep, Construction Freeway Service Patrol (CFSP), CT or Local Agency staff, etc., will be used and where. Potential TOS, or TMC, or very limited TMT use require the project team to get written consent from the TMC Manager during the PS&E stage. Resources need to be committed as early as possible so that Construction can make them available to the TMC Manager, Unit 370. DTM.TMP, Unit 375, also requires resources during construction for TMP and DTM involvement.
- 4 Email from Requestor that any necessary public outreach is in progress. Requestor needs to contact PA and CL or the Maintenance Liaison. If a local agency is doing the work, their PA/CL staff is expected to do the outreach and coordinate with CT PA/CL.
- 5 Pre-closure meeting: For significant closures, Construction needs to arrange a meeting several days - in time to meet advance notification requirements for CHP and tow services, etc. - before the closure with DTM, TMC, TMT (very limited use), and agencies such as the CHP Area COZEEP Sergeant, CHP Inland Division FSP for CFSP, Locals (to avoid work on detours), to clarify TMP elements to be used and how COZEEP, CFSP, PCMS, tow trucks, etc. need to be deployed, when and where.
- 6 Night of closure meeting: Construction needs to arrange a tailgate meeting to confirm arrangements with all appropriate units/personnel. Only minor modifications may be made at this time.
- 7 Notify TMC: RE/Inspector needs to call the TMC as agreed upon at the Pre-Closure meeting (usually at least 30 minutes prior to dropping the first cone in case of full closure or when messages on stationary CMS will be needed.) Confirm TMT support. Advise of any changes/issues that may require signage and other changes. Advise the TMC ASAP if the opening may be delayed and activate the Contingency plan. Remember to provide the 10-97 and 10-98 as well to the TMC.

**Please contact Al Afaneh, D8 DTM, 909 383-4927, or the DTM desk, 383-5911, DTM Dist08/D08/Caltrans/CAGov, if you need more information.**

Remember, DTM.TMP is unit 375 and not only needs hours in the early project phases, but also in 270, **especially for projects with complex closure approval.**

# **ATTACHMENT G**

## **Life Cycle Cost Analysis**

**I-10 EASTBOUND TRUCK CLIMBING LANES  
LIFE CYCLE COST ANALYSIS REPORT  
EA 1F760, 08-SBd-10PM 36.4/R39.2 & Riv-10-PM R0.0/R0.2  
San Bernardino and Riverside Counties, California**



**March 2019**

*Prepared for:*

**Caltrans District 8**  
464 W 4<sup>th</sup> Street  
San Bernardino, CA 92401

*Prepared by:*

**HDR Engineering, Inc.**  
2280 Market Street, Suite 100  
Riverside, CA 92501





**Table of Contents**

**1.0 INTRODUCTION..... 1-1**

    1.1 Project Description ..... 1-1

    1.2 Scope ..... 1-1

**2.0 EXISTING FACILITY ..... 2-1**

**3.0 TRAFFIC..... 3-1**

**4.0 PAVEMENT ALTERNATIVES..... 4-2**

**5.0 ANALYSIS ..... 5-1**

    5.1 Initial Construction Costs..... 5-1

    5.2 Life Cycle Costs ..... 5-1

**6.0 CONCLUSION ..... 6-1**

**7.0 REFERENCES..... 7-1**

**List of Tables**

Table 3–1. I-10 Eastbound Mainline Traffic Data..... 3-1

Table 3–2. I-10 Eastbound Mainline Traffic Index, Year 2025..... 3-2

Table 4–1. Proposed Pavement Structural Sections ..... 4-1

Table 5–1. Life Cycle Costs (Present Value Dollars [\$1,000]) ..... 5-2

Table 6–1. Recommended Pavement Structural Sections ..... 6-1

**List of Attachments**

**Appendix A Figures**

**Attachment 1 LCCA Forms**

**Attachment 2 Materials Report**

**Attachment 3 Traffic Data**

**Attachment 4 Cost Related Items**

**Attachment 5 Procedures, Assumptions, Input Data**

**Attachment 6 RealCost Report**

## 1.0 INTRODUCTION

### 1.1 PROJECT DESCRIPTION

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), proposes to extend the eastbound (EB) truck climbing lane (TCL) on Interstate 10 (I-10) from its current terminus at the existing eastbound off-ramp to Live Oak Interchange to just east of the County Line Road existing eastbound off-ramp at the San Bernardino County and Riverside County line (Project). The extension of the existing TCL within the Project limits for an additional 3-miles would improve operations by separating slow moving vehicles from faster moving passenger cars that are climbing the existing grade.

The Project is subject to both state and federal environmental review requirements because use of federal funds from the Federal Highway Administration (FHWA) is anticipated for the Project. Project documentation has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under both CEQA and NEPA.

The terminus of the proposed Project at the County Line Road Interchange was determined based on the profile grade of the existing eastbound lanes. The lane configuration at the proposed terminus allows the dedicated TCL-merge to occur after the sustained grade is less than 2 percent, meets the requirements of logical termini under NEPA, and does not conflict with existing exit ramps. Terminating the dedicated TCL at the existing County Line Road off-ramp is not preferred because it would create a forced weaving situation at the existing exit ramp since most trucks would continue eastbound on I-10 and therefore be forced to merge at this location. We understand that the existing outside two lanes are currently under bid and/or contract to be replaced and are therefore not a part of this Project.

### 1.2 SCOPE

The purpose of this report is to present the results of the Life Cycle Cost Analysis (LCCA) performed for the Project and to provide recommendations for cost-effective pavement structural sections for the proposed roadway improvements.

The pavement scope of work includes the addition of a single inside lane as well as construction of a new median as described in Section 4.0. No associated modifications to ramps, connectors, or other features is proposed as part of the Project.

## 2.0 EXISTING FACILITY

The Project is primarily located at the south edge of San Bernardino County in the City of Yucaipa and at the north edge of Riverside County in the City of Calimesa, California (see Appendix A, Figure 1). The Project proposes improvements along I-10 from PM 36.4 to R39.2 in the City of Yucaipa in San Bernardino County and from PM R0.0 to R0.2 in the City of Calimesa in Riverside County, (see Appendix A, Figures 2 and 3). The Project is located within a suburban setting with primarily commercial, commercial/industrial, open space, and some residential land uses adjacent to the Project limits.

The existing condition along I-10 within the Project limits is a six-lane freeway with three 12-foot wide Mixed Flow Lanes (MFLs) in each direction including an 8-foot wide asphalt inside shoulder and 10-foot wide asphalt outside shoulder, and a 36-foot wide median (including existing shoulders) with dual metal thrie-beam barrier separating EB and westbound (WB) roadbeds. The existing mainline pavement consists of jointed plain concrete pavement (JPCP) and we understand that proposed improvements in the truck climbing lanes (two right hand lanes) will consist of continuously reinforced concrete pavement (CRCP).

The Project is located in an Inland Valley Region (Caltrans, 2018d). Additional information regarding climate, topography, prior land uses, and other information is provided by Leighton (2019). The highway's maintenance service level is 1.

## 3.0 TRAFFIC

Traffic data was provided by Caltrans in a memorandum dated June 18, 2018. The data regarding PM R36.4 to R39.2 provided by Caltrans are summarized in Table 3–1 and Table 3–2, below. The memo is included for reference in Attachment 3. This LCCA pertains to the design of the 'inside lanes'. The 'outside lanes' are included for reference. Current Level of Service was not provided.

**Table 3–1. I-10 Eastbound Mainline Traffic Data**

Item	Year 2017	Year 2025	Year 2045	Year 2065
Annual Average Daily Traffic (AADT)	67,500	84,000	109,300	147,700
Truck % in AADT	12	14	23	23

**Table 3–2. I-10 Eastbound Mainline Traffic Index, Year 2025**

Traffic Index Year	2 Inside Lanes		2 Outside Lanes	
	Mainline	Shoulder	Mainline	Shoulder
10 Year (ESAL)	9,696,679	193,934	38,786,716	775,734
10 Year TI	12.0	7.5	14.0	8.5
20 Year (ESAL)	26,741,310	534,826	106,965,238	2,139,305
20 Year TI	13.5	8.5	15.5	10.0
40 Year (ESAL)	72,267,151	1,445,343	289,068,605	5,781,372
40 Year TI	15.0	9.5	17.5	11.0

## 4.0 PAVEMENT ALTERNATIVES

The existing Project area is generally asphalt concrete (AC) paved center median as well as unpaved median and center divider barrier. Proposed improvements include paving remaining median width as well as replacing existing median pavement with lane pavement.

The two paved surfaces within the Project area include proposed shoulder and traveled way pavement. Based on our review of the LCCA Widening flowchart (Caltrans, 2013), the pavement alternatives for consideration for the lane construction on the Project include 40-year JPCP and 40-year CRCP. For shoulder construction, we understand that JPCP is recommended to match mainline pavement, as well as to match adjacent shoulder pavements.

Caltrans (2018a) provided 40-year Traffic Indices (TI) of 15.0 for the proposed mainline lane and 9.5 for the proposed shoulder. Leighton assumed an R-value of 15 for their design, and pavement structural section design was performed by Leighton and presented in their preliminary materials report (Leighton, 2019). Concrete pavement design is based on a Type II subgrade, and per Caltrans direction the pavements are considered not laterally supported. The relevant pavement sections from their report are presented in Table 4–1, below. Additionally, Leighton’s report is included in Attachment 2.

**Table 4–1. Proposed Pavement Structural Sections**

Alternative	Pavement Composition (feet) <sup>(1)</sup>	Design Life (years)	TI	RV
Mainline 1	1.15 JPCP over 0.10 HMA BB over 0.35 LCB over 0.70 AS Class 2	40	15	15
Mainline 2	1.15 JPCP over 0.25 HMA-A over 0.70 AS Class 2	40	15	15
Mainline 3	1.00 CRCP over 0.25 HMA-A over 0.70 AS Class 2	40	15	15

Notes:

(1) JPCP = Jointed Plain Concrete Pavement, HMA = Hot Mix Asphalt, BB = Bond Breaker, LCB = Lean Concrete Base, AS = Aggregate Subbase, HMA-A = Type A HMA, CRCP = Continuously Reinforced Concrete Pavement, AB = Aggregate Base, RHMA-G = Rubberized Hot Mix Asphalt Gap-Graded, SEGT = Subgrade Enhancement Geotextile, TI = Traffic Index, RV = R-Value

(2) AB section modified per recommendations of Caltrans and Leighton (2019) to match adjacent lane thickness.

## 5.0 ANALYSIS

Caltrans requires that life-cycle cost impacts be fully taken into account when making project-level decisions for pavements. Caltrans requires an LCCA for all pavement projects that are done on the State Highway System, regardless of funding source, with minor exceptions (Caltrans, 2013). LCCAs utilize RealCost v2.5.4CA (Caltrans, 2018b) software and economic assumptions to estimate user costs and agency costs associated with different pavement alternatives over the course of the pavement's life.

### 5.1 INITIAL CONSTRUCTION COSTS

Initial construction costs were developed using the pavement sections provided by Leighton (2019) which were described in Section 4.0.

Materials costs were estimated using data from Caltrans Contract Cost Data (2018c) for projects within the last three years, adjusted average pricing, using similar material quantities, and within Caltrans District 8 where possible. Details and calculations are provided in Attachment 4. Initial construction costs are also presented in Table 5–1.

### 5.2 LIFE CYCLE COSTS

Life cycle costs include initial construction costs, maintenance costs, and user costs due to future closures for maintenance operations. Total life cycle costs for each pavement alternative are presented in Table 5–1, below. Additional procedures, assumptions, and input data are provided in Attachment 5. RealCost software report output (Caltrans, 2018b) is included in Attachment 6.

**Table 5–1. Life Cycle Costs (Present Value Dollars [\$1,000])**

Analyzed Alternative <sup>(1)</sup>	Initial Construction	Maintenance	Life Cycle		
			Agency	User	Total
Mainline 1	2,470	69	2,539	71	2,610
Mainline 2	2,399	69	2,468	71	2,539
Mainline 3	2,475	12	2,487	0	2,487

Notes:

(1) See Section 4.0 for pavement details.

## 6.0 CONCLUSION

Caltrans (2013) considers calculations LCCA evaluations in a present-value dollars, with the end goal being to analyze pavement alternatives to determine the most cost effective long-term strategy. In this analysis, agency costs and user costs are considered equivalent. The deterministic outputs of the analysis performed for this project are presented in Table 5–1, above.

Caltrans requires that documentation be provided wherever the alternative with the lowest life cycle cost is not selected. For this Project, no deviations are recommended from selecting the alternative with lowest life cycle cost. Therefore, the alternatives presented in Table 6–1 are recommended for design:

**Table 6–1. Recommended Pavement Structural Sections**

Selected Alternative	Pavement Composition (feet)
Mainline 3	1.00 CRCP over 0.25 HMA-A over 0.70 AS Class 2
Shoulder	0.90 JPCP over 1.05 AB Class 2

It is noted that the three alternatives presented for mainline construction are relatively similar in total life cycle costs, with JPCP and CRCP alternatives within about five percent of the same cost. Other considerations which are outside the scope of LCCAs, such as economies of scale or construction/detail benefits, may exist that make a JPCP alternative more attractive than is apparent from the results of this LCCA. This conclusion may be refined after completion of a final materials report.

## 7.0 REFERENCES

The following references were used in preparation of this report:

Caltrans, 2013, Life-Cycle Cost Analysis Procedures Manual, For RealCost Version 2.5CA.

Caltrans, 2016, Value of User Time Economic Parameters, <[http://www.dot.ca.gov/hq/tpp/offices/eab/benefit\\_cost/LCBCA-economic\\_parameters.html](http://www.dot.ca.gov/hq/tpp/offices/eab/benefit_cost/LCBCA-economic_parameters.html)>

Caltrans, 2017, Pavement Rehabilitation, 08-SBD-10 PM R36.8/R39.16, Project ID 081200100 EA 0K293, April.

Caltrans, 2018a, Memorandum: I-10 Eastbound Truck Climbing Lane Traffic Data Request, June 18.

Caltrans, 2018b, RealCost Version 2.5.4CA software.

Caltrans, 2018c, Contract Cost Data Lookup, <<http://sv08data.dot.ca.gov/contractcost/>>

Caltrans, 2018d, Highway Design Manual.

Leighton, 2019, Preliminary Materials Report, I-10 Eastbound Truck Climbing Lanes, EA 08-1F760, January 30.

Trading Economics, 2019, US CPI Transportation, <<https://tradingeconomics.com/united-states/cpi-transportation>>



# **ATTACHMENT H**

## **Risk Register**

LEVEL 2 - RISK REGISTER				Project Name:	SBCTA I-10 EB TCL Improvements (PA/ED)			DIST- EA	08-1F760	Project Manager	Mark S. Hager						
Risk Identification							Risk Assessment					Risk Response					
Status	ID #	Type	Category	Title	Risk Statement	Current status/assumptions	Probability	Cost Impact	Cost Score	Time Impact	Time Score	Rationale	Strategy	Response Actions	Risk Owner	Updated	
Active	08-1F760-01	Threat	Construction	Hazardous Materials	Hazardous materials in surrounding soil and lead paint could be encountered during construction, which will require an on-site storage area and potential additional costs to dispose.	Active	2-Low	2 -Low	4	2 -Low	4	Since the freeway has been in operations since 1960's hazardous materials and lead paint could be encountered during construction.	Mitigate	Include specifications for proper storage and disposal of hazardous waste in the PS&E phase.	PM / Project Engineer	6/29/2018	
Active	08-1F760-02	Threat	Construction	Buy America / Map 21	Federally funded projects are required to meet the buy America / Map 21 requirements, which may result in additional costs and increased lead times.	Active	2-Low	2 -Low	4	4 -Moderate	8	Ordering American products may require additional lead time for production and delivery, and the prices may be higher	Accept	Provisions will be added during PS&E to meet requirements.	PM / Project Engineer	6/29/2018	
Active	08-1F760-03	Threat	Environmental	Nesting birds	Nesting birds, protected from harassment under the Migratory Bird Treaty Act, may delay construction during the nesting season.	Active	2-Low	1 -Very Low	2	4 -Moderate	8	Agricultural areas near Live Oak Canyon could provide a potential habitat for nesting birds.	Mitigate	Schedule contract work to avoid the nesting season or remove nesting habitat before starting work.	PM / Project Engineer	6/29/2018	
Active	08-1F760-04	Threat	Design	Supplemental EIR	A design change that is outside of the parameters contemplated in the Environmental Document could trigger a supplemental EIR, thereby causing a delay due to the public comment period.	Active	1-Very Low	1 -Very Low	1	4 -Moderate	4	Potential lane shifting/ pavement reconstruction beyond project limits could trigger the need for a supplemental EIR.	Avoid	Monitor design changes against ED to avoid reassessment of ED unless the opportunity outweighs the threat.	PM / Project Engineer	6/29/2018	
Retired	08-1F760-05	#REF!	Design	Eastern Terminus	The Eastern Terminus at County Line Road is not consistent with the PSR, and if not approved it would lead to a redesign and increased schedule delays and construction costs.	Retired, the Traffic Operations Analysis Report (TOAR) has been approved in October, 2018.	1-Very Low	1 -Very Low	1	1 -Very Low	1	If the proposed Eastern Terminus at County Line Road is not approved it would lead to a redesign and increased schedule delays and construction costs.	Accept	The Traffic Operations Analysis Report showed the operational benefits of having the TCL lane drop past the County Line Rd EB exit and where the longitudinal grades fall below 2%. The GADs have been approved.	PM / Project Engineer	1/18/2019	
Active	08-1F760-06	Threat	Design	Noise Barriers	Noise barriers may need to be included as part of the project, which would cause an increase in project footprint, construction costs, and potential schedule delays for design.	Active	3-Moderate	4 -Moderate	12	4 -Moderate	12	Including noise barriers would require additional project footprint, construction costs and have the potential for schedule delays for the design of noise barriers.	Accept	Monitor the noise study. Noise barriers are subject to Public voting to determine whether or not they will be constructed.	PM / Project Engineer	11/12/2019	
Active	08-1F760-07	Threat	Design	Permits at Wilson Creek	Environmental permits at Wilson Creek bridge may be delayed, which would have impacts to the project schedule.	Active	2-Low	2 -Low	4	4 -Moderate	8	Delays in obtaining permits may cause delays in construction schedule.	Mitigate	Monitor the permit process and allow for delays during the application process.	PM / Project Engineer	6/29/2018	
Retired	08-1F760-08	Opportunity	Design	Rehabilitation Project	The pavement rehabilitation project in the area would provide strengthened shoulders and good pavement, which could lead to reduced costs and a reduction in the project schedule.	Retired, the rehabilitation project is currently under construction as of November of 2019.	1-Very Low	1 -Very Low	1	1 -Very Low	1	The design assumes the existing pavement will be adequate after completion of the rehabilitation project.	Accept	If rehabilitation project is delayed, pavement accommodations may need to be accounted for during construction (i.e., shoulder strengthening, etc.).	PM / Project Engineer	11/12/2019	
Retired	08-1F760-09	Threat	Design	Rehabilitation Project	The planting proposed by the rehabilitation project may conflict with the location of potential sound barriers	Retired, the noise barrier previously proposed ROW adjacent near planting locations is not economically feasible and other noise barrier locations outside Caltrans ROW are being considered.	2-Low	2 -Low	4	2 -Low	4	The rehabilitation project will plant trees near the location of a potential sound barrier that is acoustically feasible and that would benefit the Hillcrest Mobile Estates. Some of these trees may need to be removed if in conflict with the sound barrier.	Mitigate	Coordinate with the PDT of the rehabilitation project to request that the location of the trees is revised to avoid potential conflicts with the noise barrier.	PM / PDT	11/12/2019	
Retired	08-1F760-10	Threat	Design	Design Standard Decision Document Approval	Nonstandard features may not be approved.	Retired, the DSDD has been approved in January, 2018.	1-Very Low	1 -Very Low	1	1 -Very Low	1	The design would need to be revisited if the Design Standard Decision Document is not approved, which could cause increased construction costs and schedule delays due relating to design.	Accept	The DSDD has been approved. Justification was provided for the nonstandard features and the reasons why these cannot be made standard, including but not limited to the impacts to environmental sensitive areas, hydrology, cost, and project schedule.	PM / Project Engineer	1/18/2019	
Active	08-1F760-11	Threat	Design	Potential Staging Areas	Additional staging areas may be required on adjacent vacant properties.	Active	2-Low	4 -Moderate	8	4 -Moderate	8	Additional staging areas would require R/W negotiations with adjacent property owners and increase the overall project cost.	Avoid	Attempt to avoid additional staging areas through design.	PM / Project Engineer	6/29/2018	
Active	08-1F760-12	Threat	Organizational	Funding	Trade Corridor Improvement Fund (TCIF) dollars may not be available.	Active	2-Low	4 -Moderate	8	2 -Low	4	Trade Corridor Improvement Fund (TCIF) dollars may not be available for this project, which would require additional funding from another source.	Mitigate	Monitor existing funding and look for opportunities to cover TCIF dollars should they not be available for this project.	PM / Project Engineer	6/29/2018	
Active	08-1F760-13	Threat	Construction	Escalation Fluctuation	Escalation rates for labor and materials may fluctuate prior to start of construction.	Active	2-Low	4 -Moderate	8	2 -Low	4	Construction is set to begin in 2020, and with current market fluctuations, escalation rates could change, causing the project to cost more than originally anticipated.	Mitigate	Monitor existing market trends and ensure project schedule does not slip during design.	PM / Project Engineer	6/30/2018	
Active	08-1F760-14	Threat	Organizational	Funding	Meeting CTC Funding Deadline	Active	3-Moderate	2 -Low	6	2 -Low	6	California Transportation Commission (CTC) dollars may not be available for this project if the deadline to apply is not met, which would require additional funding from another source.	Mitigate	Work with PDT to try to expedite pending submittals, reviews and approvals to finish the PA/ED phase prior to the deadline to apply for funding.	PM / PDT	11/12/2019	

# **ATTACHMENT I**

## **Project Category Approval**

# Memorandum

*Serious drought.  
Help Save Water!*

To: CHRISTY CONNORS  
DEPUTY DISTRICT DIRECTOR  
DESIGN

Date: February 02, 2017

File: 08-SBd-10-36.4/R39.2  
08-Riv-10-R0.0/R0.2  
Add TCL (EB)  
08-2201-1F760K  
ID 0815000050

From: MAEN SHAAR *MS*  
PID/Special Studies  
Planning

Subject: **REQUEST FOR PROJECT DEVELOPMENT CATEGORY APPROVAL**

In accordance with Chapter 8, Section 5 of the Project Development Procedure Manual, your approval is requested to assign the above-mentioned project to Category 4B.

A Project Study Report-Project Development Support (PSR-PDS) is being prepared to add an east bound truck climbing lane to improve Level of Service (LOS) and safety at this segment of interstate 10. The project is located in Yucaipa from the 16<sup>th</sup> street overcrossing in San Bernardino County to 0.2 mile east of County Line Road undercrossing in Riverside County. It is a locally funded project.

The scope includes adding an EB TCL by widening the median only, widening the Oak Glen Creek Bridge, installing concrete barrier in the median, and adding sound wall in the west bound.

The Category 4B is recommended based on the following project considerations:

1. The project will not require additional right of way
2. The project will not increase freeway traffic capacity

APPROVED BY:

*ma*   
CHRISTY CONNORS  
Deputy District Director  
Design

2/6/17  
Date

## **ATTACHMENT J**

### **Signature Pages of Project Study Report / Project Development Support**

## Project Study Report-Project Development Support (PSR-PDS)

To

### Request Approval of a Locally Funded Project to Proceed to Project Approval and Environmental Document Phase

On Route 10  
Between 16<sup>th</sup> Street Overcrossing  
And County Line Road Undercrossing

APPROVAL RECOMMENDED:

 MELECIO CHALCO, CALTRANS Project Manager

APPROVAL RECOMMENDED:

 RAY DESSELLE, Deputy District Director, Planning

APPROVED:

 JOHN BULINSKI, DISTRICT DIRECTOR      6/13/17  
DATE

# Memorandum

*Making Conservation  
a California Way of Life.*

To: JOHN BULINSKI  
DISTRICT DIRECTOR

Date: March 30, 2017

File: 08-SBd-10-PM 36.4/R39.2  
08-Riv-10-PM R0.0/R0.2  
EA 1F760K- Program 800.100  
Project ID No. 0815000050

From: MAEN SHAAR <sup>MS</sup>  
Planning


Subject: **PROJECT STUDY REPORT-PROJECT DEVELOPMENT SUPPORT (PSR-PDS)**

It is recommended that the attached PSR-PDS for the above-referenced project be approved.

CONCURRED BY:

  
\_\_\_\_\_  
RAY I. BESELLE  
Deputy District Director  
Planning

CONCURRED BY:

  
\_\_\_\_\_  
CATALINO A. PINING III  
Deputy District Director  
Traffic Operations

CONCURRED BY:

  
\_\_\_\_\_  
CHRISTY CONNORS  
Deputy District Director  
Design

CONCURRED BY:

  
\_\_\_\_\_  
DAVID BRICKER  
Deputy District Director  
Environmental Planning

CONCURRED BY:

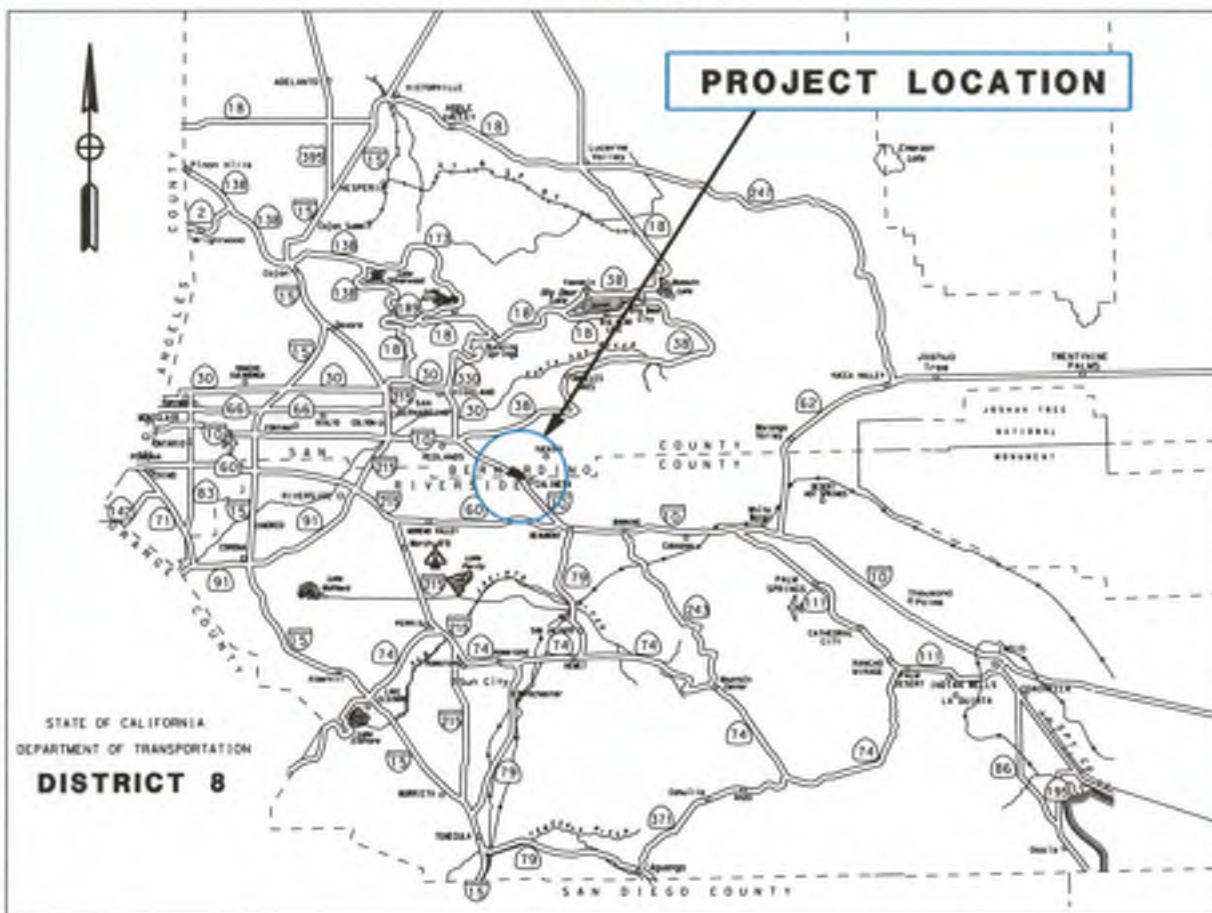
  
\_\_\_\_\_  
SYED RAZA  
Deputy District Director  
Program Project Management

Attachment: PSR-PDS  
c: Maen Shaar

## VICINITY MAP

08-SBd-10-PM 36.4/R39.2  
08-Riv-10-PM R0.0/R0.2  
EA 1F760K (0815000050)  
April 2017

### PROJECT STUDY REPORT PROJECT DEVELOPMENT SUPPORT (PSR-PDS)



**ON INTERSTATE 10 (I-10)  
IN YUCAIPA FROM 16TH STREET OVERCROSSING  
TO 0.2 MILE EAST OF COUNTY LINE ROAD UNDERCROSSING**



This project study report-project development support has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

*Maen Shaar*  
REGISTERED CIVIL ENGINEER

*3/30/17*  
DATE



# **ATTACHMENT K**

## **Initial Site Assessment Checklist**



# Initial Site Assessment (ISA) Checklist

## Project Information

District 8 County SBd/Riv Route I-10 Post Mile SBd 36.4-R39.2 and Riv R0.0-R0.2 EA 1F7600

Description Interstate 10 (I-10) Eastbound Truck Climbing Lane Project. See attached project description

Is the project on the HW Study Minimal-Risk Projects List (HW1)? \_\_\_\_\_

Project Manager Mohammed H. Rahman phone # (909) 388-7016

Project Engineer Aysha Habib phone # (909) 806-2554

## Project Screening

Attach the project location map to this checklist to show location of all known and/or potential HW sites identified.

1. Project Features: New R/W? NO Excavation? YES Railroad Involvement? NO  
Structure demolition/modification? YES Subsurface utility relocation? NO

2. Project Setting Interstate 10 median and fast lane shoulders between SBd PM 36.4 and R39.2 and Riv PM R0.0 and R0.2

Rural or Urban Rural to suburban

Current land uses Freeway

Adjacent land uses Light industrial, commercial, agricultural, residential

(industrial, light industry, commercial, agricultural, residential, etc.)

3. Check federal, State, and local environmental and health regulatory agency records as necessary, to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information for the proposed project.

4. Conduct Field Inspection. Date 4/27/18 Use the attached map to locate potential or known HW sites. See I-10 EB TCL ISA (Leighton 2018)

### STORAGE STRUCTURES / PIPELINES:

Underground tanks None Surface tanks None

Sumps None Ponds None

Drums None Basins None

Transformers None Landfill None

Other Potential Treated Wood on Median Guardrail supports and Median Sign Posts

## Initial Site Assessment (ISA) Checklist

(continued)

CONTAMINATION: (spills, leaks, illegal dumping, etc.)

Surface staining None Oil sheen None

Odors None Vegetation damage None

Other None

HAZARDOUS MATERIALS: (asbestos, lead, etc.)

Buildings Oak Glen Creek Bridge Spray-on fireproofing \_\_\_\_\_

Pipe wrap \_\_\_\_\_ Friable tile \_\_\_\_\_

Acoustical plaster \_\_\_\_\_ Serpentine \_\_\_\_\_

Paint \_\_\_\_\_ Other \_\_\_\_\_

5. Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. Use the attached map to show the location of potential hazardous waste sites.

6. Other comments and/or observations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **ISA Determination**

Does the project have potential hazardous waste involvement? Yes If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Investigation? No If "YES," explain; then give an estimate of additional time required: \_\_\_\_\_

As previously identified in the 2018 ISA, a Lead Compliance Plan (LCP) will be required for ADL, traffic striping, and lead-based paint on the Oak Glen Creek Bridge. No new hazardous waste/material sites were identified in the ISA Update Memorandum (2020) that would warrant additional ISA work or preliminary site investigations (PSI).

A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.

**ISA Conducted by** Uyenlan Vu **Date** 6/26/2020

## **ATTACHMENT L**

### **Cover and Signature Page of Approved Environmental Document**

# **I-10 Eastbound Truck Climbing Lane Improvement Project**

CITIES OF YUCAIPA AND CALIMESA  
SAN BERNARDINO AND RIVERSIDE COUNTIES, CALIFORNIA  
08-SBd-10-PM 36.4/R39.2  
08-RIV-10-PM R0.0/R0.2  
PN 0815000050/EA 08-1F7600

## **Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact**



**Prepared by the  
State of California, Department of Transportation  
and  
San Bernardino County Transportation Authority**

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.



**November 2020**

SCH# 2020079008  
08-SBd-10-PM 36.4/R39.2  
08-RIV-10-PM R0.0/R0.2  
EA: 08-1F7600  
Project No. 0815000050

Interstate 10 Eastbound Truck Climbing Lane Improvement Project  
(Postmile 36.4 to R39.2 and R0.0 to R0.2) in the Cities of Yucaipa and Calimesa,  
San Bernardino and Riverside Counties, California.


## **Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact**

Submitted Pursuant to: (State) Division 13, California Public Resources Code  
(Federal) 42 U.S.C. 4332(2)(c)

THE STATE OF CALIFORNIA  
Department of Transportation  
and  
San Bernardino County Transportation Authority

11/10/2020

Date of Approval



David Bricker  
Deputy District Director  
District 8 Division of Environmental Planning  
California Department of Transportation  
CEQA & NEPA Lead Agency

The following persons may be contacted for more information about this document:

Antonia Toledo, MS  
Senior Environmental Planner  
Caltrans District 8  
464 West 4th Street, MS-820  
San Bernardino, CA 92401

Timothy Watkins  
San Bernardino County Transportation Authority  
1170 West 3rd Street, 2nd Floor  
San Bernardino, CA 92410

CALIFORNIA DEPARTMENT OF TRANSPORTATION  
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR

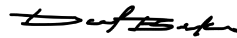
Interstate 10 Eastbound Truck Climbing Lane Improvement Project

The California Department of Transportation (Caltrans) has determined that the Build Alternative will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment (EA) which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA.

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

11/10/2020

Date



David Bricker  
Deputy District Director  
District 8 Division of Environmental Planning  
California Department of Transportation  
NEPA Lead Agency





# Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

## Project Description

The San Bernardino County Transportation Authority (SBCTA), in cooperation with the California Department of Transportation (Caltrans), will extend the eastbound (EB) truck climbing lane (TCL) on Interstate 10 (I-10) from its current terminus, at the existing EB off-ramp to the Live Oak interchange, to east of the County Line Road EB off-ramp, at the San Bernardino County and Riverside County line. I-10 serves as the major east/west urban corridor and commuter route between Los Angeles and San Bernardino and Riverside Counties. Rural areas in eastern Riverside County are connected to the urban centers to the west via the I-10.

Two alternatives were evaluated as part of the I-10 EB TCL Improvement Project (Project): Alternative 1 (No-Build Alternative) and Alternative 2 (Build Alternative). Alternative 2 (Build Alternative) proposes to extend the existing TCL for an additional 3 miles to improve operations by separating slow-moving vehicles from faster moving passenger cars on a portion of EB I-10 with sustained grades of up to 4 percent. The Project improvements along I-10 are from Postmile (PM) 36.4 to R39.2 in the City of Yucaipa in San Bernardino County and PM R0.0 to R0.2 in the City of Calimesa in Riverside County.

## Determination

Caltrans has prepared an Initial Study for this Project and, following public review, has determined from this study that the Project will not have a significant effect on the environment for the following reasons:

The Project will have no effect on Agriculture and Forest Resources, Land Use and Planning, Cultural Resources, Mineral Resources, Population and Housing, and Recreation.

With the implementation of the avoidance and minimization measures, the Project will have less than significant effects on Aesthetics, Air Quality, Biological Resources, Energy, Hazardous and Hazardous Materials, Hydrology and Water Quality, Noise, Public Services, Transportation, Tribal Cultural Resources, Utilities and Service Systems, Greenhouse Gas, and Wildfire.

With the following mitigation measure incorporated, the Project will have less than significant effect on Geology and Soils.

**PAL-1** SBCTA will ensure a paleontological mitigation plan is prepared by a qualified Project Paleontologist/Principal Investigator prior to completion of the final design phase of this Project for all Project-related ground disturbance in areas of paleontological sensitivity. All elements of the paleontological mitigation plan will follow the format published in the Caltrans Standard Environmental Reference (SER). The paleontological mitigation plan will detail the measures to be implemented and include a requirement for Worker's Environmental Awareness Program (WEAP) training to address the required interfacing of paleontological and construction personnel.



\_\_\_\_\_  
David Bricker  
Deputy District Director  
District 8 Division of Environmental Planning  
California Department of Transportation  
CEQA Lead Agency

11/10/2020

\_\_\_\_\_  
Date

## **ATTACHMENT M**

### **Noise Barrier Monitoring and Modeling Locations**



02/20 JN 163305 MAS

SOURCE: Google Earth Pro Aerial, March 2018

SEE EXHIBIT 4b

### Noise Monitoring and Modeling Locations Exhibit 4a

**LEGEND**

- Noise Modeling Locations
- Short-term Noise Measurement and Modeling Locations
- Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
- Acoustically Equivalent Noise Measurement Location
- Right of Way
- Potential Barrier Locations

NOTE: Barrier locations are approximate and are not drawn to scale.



0 Feet 200

08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project

SEE EXHIBIT 4a



SEE EXHIBIT 4c

SOURCE: Google Earth Pro Aerial, March 2018

## Noise Monitoring and Modeling Locations Exhibit 4b

### LEGEND

- Noise Modeling Locations
- Short-term Noise Measurement and Modeling Locations
- ◆ Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
- Acoustically Equivalent Noise Measurement Location
- - - Right of Way
- - - Potential Barrier Locations
- - - Potential Barrier Locations

NOTE: Barrier locations are approximate and are not drawn to scale.



0 Feet 200

08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project

SEE EXHIBIT 4b



SEE EXHIBIT 4d

05/19 JN 163305 MAS







SOURCE: Google Earth Pro Aerial, March 2018

SEE EXHIBIT 4d

## Noise Monitoring and Modeling Locations

Exhibit 4c

### LEGEND

-  Noise Modeling Locations
-  Short-term Noise Measurement and Modeling Locations
-  Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
-  Acoustically Equivalent Noise Measurement Location
-  Right of Way
-  Potential Barrier Locations

NOTE: Barrier locations are approximate and are not drawn to scale.



0 Feet 200

08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project



SEE EXHIBIT 4c

05/19 JN 163305 MAS

SEE EXHIBIT 4e

SEE EXHIBIT 4e

SOURCE: Google Earth Pro Aerial, March 2018

### Noise Monitoring and Modeling Locations Exhibit 4d

**LEGEND**

- Noise Modeling Locations
- Short-term Noise Measurement and Modeling Locations
- Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
- Acoustically Equivalent Noise Measurement Location
- Right of Way
- Potential Barrier Locations



0 Feet 200

NOTE: Barrier locations are approximate and are not drawn to scale.

08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project

SEE EXHIBIT 4d



02/20 JN 163305 MAS







SOURCE: Google Earth Pro Aerial, March 2018

SEE EXHIBIT 4f

## Noise Monitoring and Modeling Locations

Exhibit 4e

### LEGEND

-  Noise Modeling Locations
-  Short-term Noise Measurement and Modeling Locations
-  Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
-  Acoustically Equivalent Noise Measurement Location
-  Right of Way
-  Potential Barrier Locations

NOTE: Barrier locations are approximate and are not drawn to scale.



0 Feet 200

08-SBD-10 PM 36.4/R39.2 &  
08-RIV-10 PM R0.0/R0.2  
EA 1F7600  
I-10 Eastbound TCL  
Improvement Project



SEE EXHIBIT 4e



02/20 JN 163305 MAS







SOURCE: Google Earth Pro Aerial, March 2018

SEE EXHIBIT 4g

## Noise Monitoring and Modeling Locations

Exhibit 4f

### LEGEND

-  Noise Modeling Locations
-  Short-term Noise Measurement and Modeling Locations
-  Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
-  Acoustically Equivalent Noise Measurement Location
-  Right of Way
-  Potential Barrier Locations

NOTE: Barrier locations are approximate and are not drawn to scale.



0 Feet 200

08-SBD-10 PM 36.4/R39.2 &  
 08-RIV-10 PM R0.0/R0.2  
 EA 1F7600  
 I-10 Eastbound TCL  
 Improvement Project

SEE EXHIBIT 4f



02/20 JN 163305 MAS

SOURCE: Google Earth Pro Aerial, March 2018

## Noise Monitoring and Modeling Locations

Exhibit 4g

### LEGEND

- Noise Modeling Locations
- Short-term Noise Measurement and Modeling Locations
- ◆ Short-term Measurement, Long-term Measurement, and Noise Modeling Locations
- Acoustically Equivalent Noise Measurement Location
- Right of Way
- Potential Barrier Locations

NOTE: Barrier locations are approximate and are not drawn to scale.



0 Feet 200

08-SBD-10 PM 36.4/R39.2 &  
 08-RIV-10 PM R0.0/R0.2  
 EA 1F7600  
 I-10 Eastbound TCL  
 Improvement Project

## **ATTACHMENT N**

### **Design Standard Decision Document Signed Cover Page**

## DESIGN STANDARD DECISION DOCUMENT



Prepared By:

JULIAN HERNANDEZ, P.E.  
Project Engineer, HDR Engineering, Inc.

4-18-19

Date

Submitted By:

JUSTINE NIU, P.E.  
Design Oversight  
Caltrans District 8

4-18-2019

Date

(909)806-3202  
TELEPHONE

- Includes design decisions to District delegated Boldface Standards (Section II)  
 Includes design decisions to Underlined Standards (Section III)  
 Concurs with design decisions to non-delegated Boldface Standards (Section I):  
 Approved By:

JAMAL M ELSALEH  
Acting Deputy District Director of Design

4-23-19

Date

- Includes design decisions to non-delegated Boldface Standards (Section I)  
 Signature Not Required

Approved By:

LUIS BETANCOURT  
Project Delivery Coordinator  
Headquarters – Division of Design

5/1/19

Date

# **ATTACHMENT O**

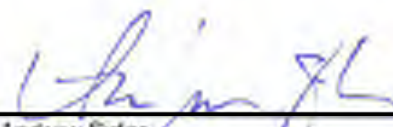
## **Storm Water Data Report Signed Cover Page**



Dist-County-Route: 08-SBd/Riv-10  
 Post Mile Limits: 36.4/R39.2 & R0.0/R0.2  
 Type of Work: Lane Improvements  
 Project ID (EA): 0815000050 (EA 1F7600)  
 Program Identification: 075.600, 800.100 - HE13  
 Phase:  PID  PA/ED  PS&E

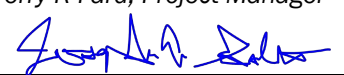
Regional Water Quality Control Board(s): Santa Ana (8)  
 Total Disturbed Soil Area: 12.3 acres PCTA: 12.3 acres  
 Alternative Compliance (acres): +2.29 acres ATA 2 (50% Rule)? Yes  No   
 Estimated Const. Start Date: 6/17/2022 Estimated Const. Completion Date: 12/26/2023  
 Risk Level: RL 1  RL 2  RL 3  WPCP  Other: \_\_\_\_\_  
 Is MWEL0 applicable? Yes  No   
 Is the Project within a TMDL watershed? Yes  No   
 TMDL Compliance Units (acres): \_\_\_\_\_  
 Notification of ADL reuse (if yes, provide date): Yes  Date: \_\_\_\_\_ No

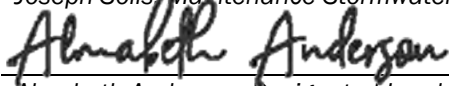
*This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.*

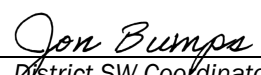

  
 Andrew Sidor, Registered Project Engineer  
 10/9/2020  
 Date

*I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:*

  
 Ferry R Fard, Project Manager  
 10/19/2020  
 Date

  
 Joseph Solis, Maintenance Stormwater Coordinator  
 10/21/2020  
 Date

  
 Almabeth Anderson, Designated Landscape Architect  
 10/21/2020  
 Date

  
 Jon Bumps, District SW Coordinator  
 10/23/2020  
 Date   
 10/23/2020